

Manufacturers RECORD

An Exponent of Americanism

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The Work That You Do Every Day

By James E. Clark, Secretary Conference Committee on National Preparedness.

LET the work that you do every day be dedicated—

To the memory of the babies of France and Belgium who were impaled on bayonets and carried off over the shoulders of German soldiers—that your baby may never be in danger of a like death.

LET the work that you do every day be dedicated—

To the memory of the little boys in the invaded districts of Europe who have been crucified—that your own boy may not be in danger of being crucified.

LET the work that you do every day be dedicated—

To the memory of the little girls of Belgium and France who have been carried into a slavery far worse than death—that your daughter may not be in danger of thus falling a victim to German barbarians.

LET the work that you do every day be dedicated—

To the memory of the mothers of Europe who have seen their children slaughtered and their husbands with bound hands driven away to a fate unknown—that the mothers here may not see similar processions in your own streets.

LET the work that you do every day be dedicated—

To the white-haired women of Belgium and France who have seen honest men dig their own graves—that the white-haired of your family may not suffer a like agony.

LET the work that you do every day be dedicated—

To the memory of the Allied soldiers who have been crucified upon doors because they fought for civilization and justice—that justice may be done you and yours.

LET the work that you do every day be dedicated—

To the memory of the beautiful cities, villages, orchards and fields of Europe, now blackened wastes—that your own beautiful towns and fields may not be turned into places which men will avoid.

LET the work that you do every day be dedicated—

To the memory of the once happy homes in Europe which the Hun burned after murdering the inmates—that your home may not become the funeral pyre of your family.

LET the work that you do every day be dedicated—

To the memory of the nations that have been crushed and scattered—that your own nation may not be destroyed and that your people may not be driven forth like the migrating multitudes who have died in the fields and the highways.

LET the work that you do every day be dedicated—

To the manhood that is in you—that you may not desert your brother who has gone to the battlefield, that you may not desert your nation now that it needs you, that you may not be tricked into imperiling the safety of your wife, your daughter, your mother, when the smooth-tongued enemies of your country come whispering to you.

LET the work that you do every day be dedicated—

To the manhood that is in you, that you shall have no remorse when broken men come back from the battlefield—so that empty sleeves and sightless eyes shall not as instruments of your own conscience reproach you by day and haunt you by night because you at home failed to support our men while they fought in France.

Bethlehem Steel Company

South Bethlehem, Pennsylvania

PIG IRON: Basic, Bessemer, Foundry, Low Phosphorus, Mayari, Ferro-Manganese, Spiegeleisen.

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FORGINGS: Drop, Hammered, Hydraulically Pressed, Solid and Hollow, Rough and Finished Machined; Cement Mill, and Ore Crusher Balls.

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August 22, 1941

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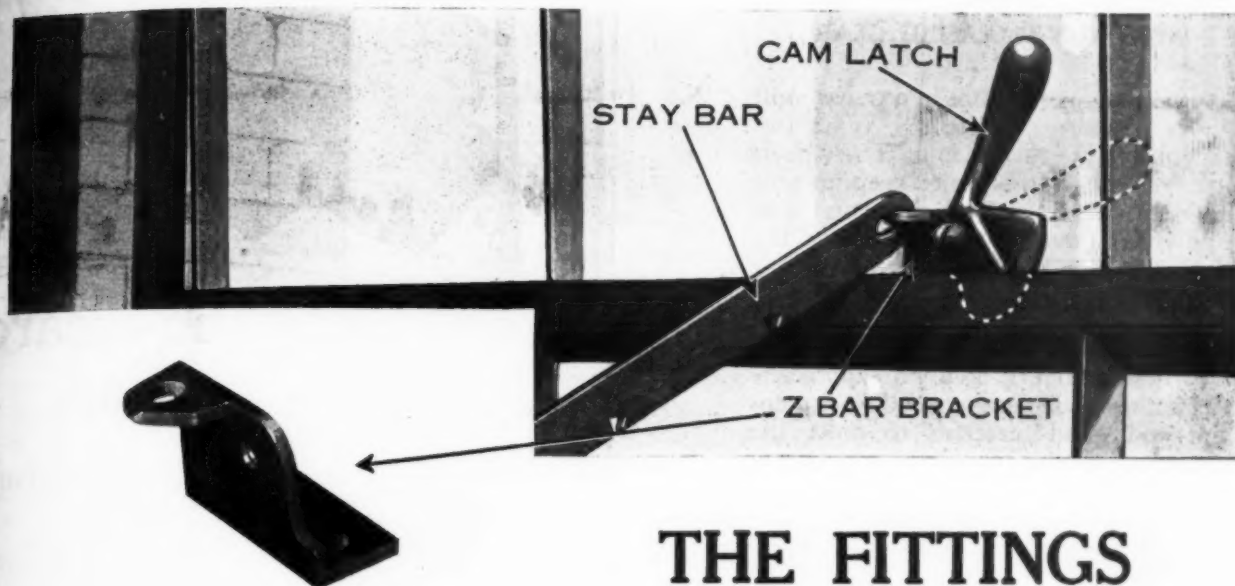
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STEEL SASH ESSENTIALS



THE FITTINGS

EASE of Operation with Permanence of construction win the preference in any decision on steel sash. The fittings on Fenestra Solid Steel Windows are designed to assure these essentials.

The cam latch—exclusive with Fenestra—works almost automatically. You pull the ventilator shut—the cam latch rides up over the weathering and falls inside. Your window is locked tight.

The Fenestra Stay Bar is a straight piece of smooth steel about one inch wide

notched on the lower edge. You push the ventilator open until the notches engage the weathering—that's all.

The Cam Latch and the Stay Operator are attached to the ventilator by a "Z Bar Bracket"—a solid rolled "Z" bar, which is triple riveted to the sill of the ventilator. That's why Fenestra fittings don't come off.

Complete details of Fenestra construction are explained in our catalog. Copy on request.

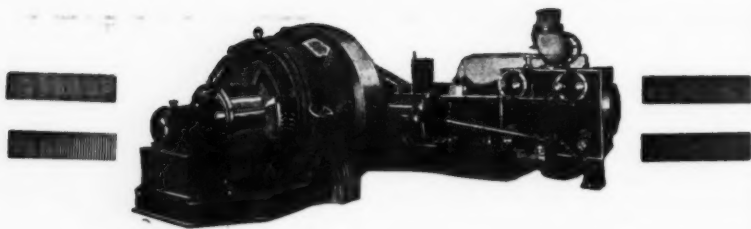
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Fenestra

SOLID STEEL WINDOWS



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WITH NON-RELEASING GEAR

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Ball engines are built to meet the needs of particular buyers, men who appreciate that it takes good design, good workmanship, and good materials to meet the demands of modern power plant practice.

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It's a paying investment

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Manufacture the **Morgan Producer-Gas Machines** and **Dyblie Gas Reversing Valves**, whose records of capacity, efficiency and labor-saving stand pre-eminent.

Many complete Gas plants on open hearth service are now being installed for leading steel works.

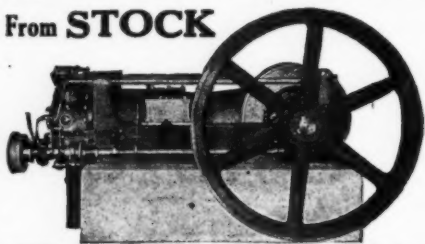
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Starts on its own fuel—no storing of compressed air.
No hot bulb—no standby losses.
Save fuel—Save wages.

BOEC
OIL ENGINES

Burn any liquid fuel.
Designed for American conditions.

Baltimore Oil Engine Co.
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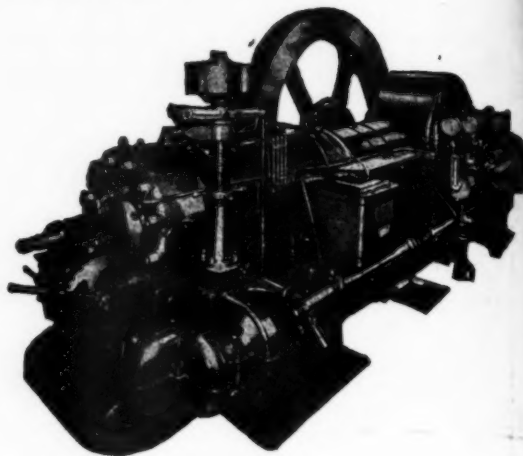
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Warnings about next winter's coal supply are already appearing.

At the best the outlook is for a shortage of many millions of tons below the country's normal supply.

"No Coal" Offers two alternatives—

- 1—Shut down.
- 2—Employ some other source of power.

Shutting down is unthinkable when top speed production is so vital to our very national life. It logically follows that power users must turn to a dependable substitute. The Snow Oil Engine is a unit, which even in normal times, and above all in times of coal famine, has proved itself a reliable, money saving alternative.

SNOW
OIL
ENGINE

The Snow Oil Engine is a Complete power plant in itself. It cuts out the upkeep of boilers, stokers, superheaters, etc. It has no auxiliaries to be kept alive during standby periods. It develops great power on low fuel consumption and what you spend for fuel is actually converted into power.

The Snow Oil Engine is suitable for every power purpose—driving generators, pumps, air compressors, line shafting, etc. It operates on the lowest grades of cheap crude oil; starts instantly and picks up full load in 11 seconds. High compression type, requiring no ignition apparatus. No explosive shocks—no vibration.

Send for Bulletin S-130-29 and get full details about the Snow Oil Engine

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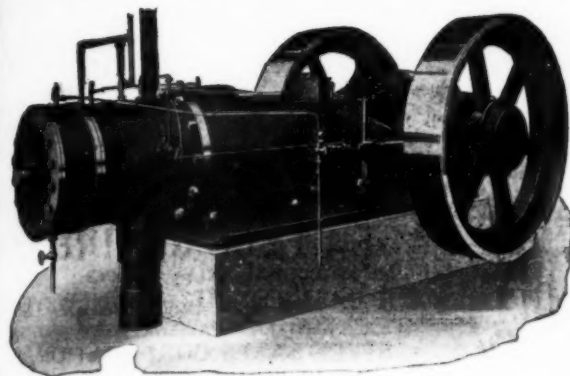
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STIMPSON

70 FRANKLIN AVE. **BRASS AND COPPER** BROOKLYN NEW YORK

"TUBING"

PRIMM HEAVY OIL ENGINES



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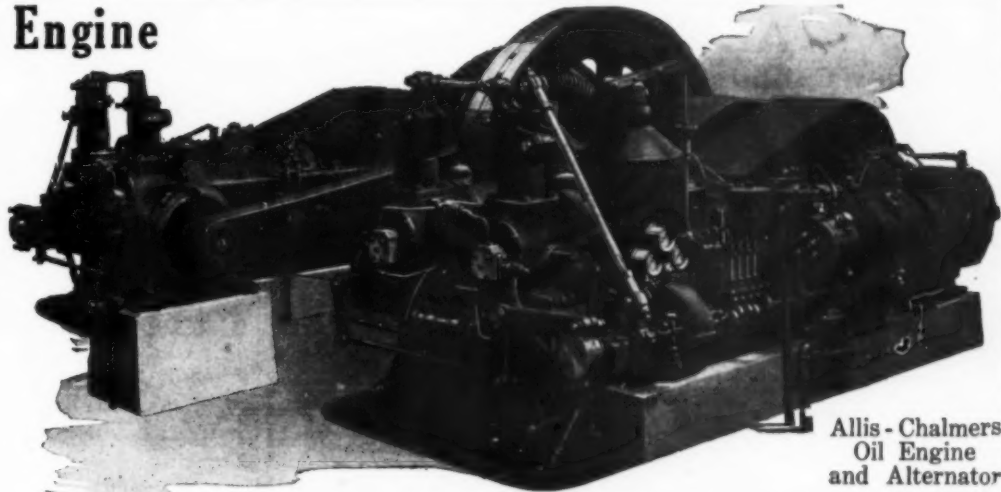
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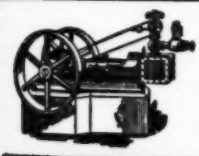
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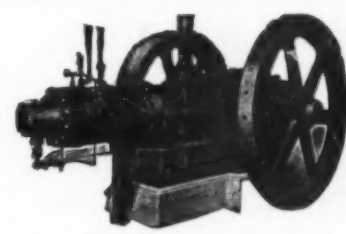
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Standard
Types
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The extensive use of electrical power in the modern factory emphasizes the importance of an efficient armored conductor.

Wiring of mechanical installations, particularly such as cranes and other moving machines, demands a conductor that is not only flexible, but also really armored.



REALFLEX answers to these specifications. In our large works we have used it for years and thus tested it under all conditions, finding it easy to install, durable and efficient.

For installations where dampness, acid fumes or similar conditions are to be met, Lead-covered REALFLEX is recommended.

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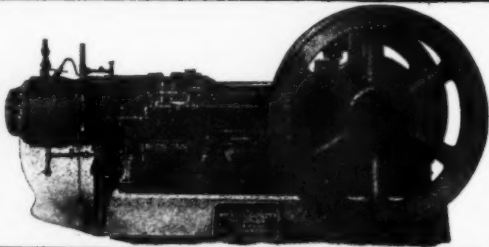
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Buckeye Barrett CRUDE OIL ENGINES

SEMI DIESEL

For all power purposes
75 to 180 H. P.

The Buckeye Machine Co.
LIMA, OHIO

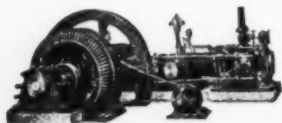


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Boilers of All Styles and Sizes

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ECONOMY renewable FUSES

primarily because of their accuracy. Of course, these industries, all others, have an eye out for saving—but they must think of safety first. Hence there is real significance in the fact that they rely on Economy Fuses for safety against the fire hazard and the damage which would be caused by overloads or short circuits reaching the important electrical equipment.

Now, when maximum safety and maximum saving go hand in hand, why should any fuse user wish it otherwise? A trial will convince you that **ECONOMY renewable FUSES** are accurate to a hair-cut annual fuse maintenance costs 80%

Write for Catalog 93

ECONOMY FUSE & MFG. CO.

Kinzie and Orleans Sts., CHICAGO, U. S. A.

Sole Manufacturers of "ARKLESS"—The Non-Renewable Fuse with the "100% Guaranteed Indicator"

ECONOMY FUSES ARE ALSO MADE IN CANADA AT MONTREAL



An inexpensive "Drop Out" Fuse Link restores Economy Fuse to normal efficiency.

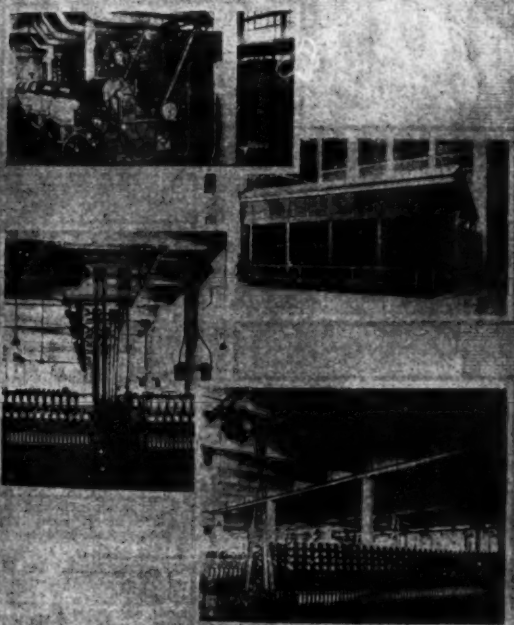
Westinghouse Electric-Drive

From the day electric drive was first used in the Textile Industry, Westinghouse has kept in touch with every development in textile methods and machinery, and has thus been able to improve existing electrical equipment and devise new and more efficient methods of supplying, distributing, controlling and utilizing power.

Circular 7153

—is a timely publication which should be in the hands of every textile man—particularly those who feel the need of increased efficiency and increased productive power.

WESTINGHOUSE ELECTRIC & MANUFACTURING CO., East Pittsburgh, Pa.



Practice in the Big Spinning Mill of the Nantuxing Spinning Co., Szechwan, China.
1. Double Roller "Pillar" Driven Individually by a Westinghouse Motor.
2. A "Columbus" Type of Four Frame Spinning Machine.
3. To Mill Building, Power Plant, the Szechwan "Miao" Mill, the Szechwan "Miao" Mill.
4. Four-Frame Textile Drive on Four-Frame Drive.

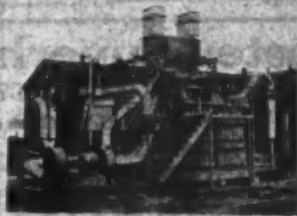
Westinghouse Service to Textile Manufacturers

ELECTRIC drive is now in general use in textile mills because textile manufacturers have found by experience that it increases production and improves the quality of the goods. These advantages, however, are not the only ones secured through the use of this drive, for in addition it provides greater safety and cleanliness, better lighting, entire freedom as to the arrangement of the machinery, and the ability to operate any of the machines independently of the rest.

In some lines of manufacturing the selection of electrical equipment is a comparatively simple matter, but this is not the case in the textile industry. Textile machines in general perform work of a delicate, complicated nature, and in order to obtain maximum production from them, each one must be provided with a drive that exactly fits its special characteristics. Thus, some must be started abruptly, and others must be started smoothly and easily. Some must be operated at a rigidly constant speed, while with others the speed must be varied at certain points in the process. Some can be readily driven in small groups, but others require individual motors to produce the best results.

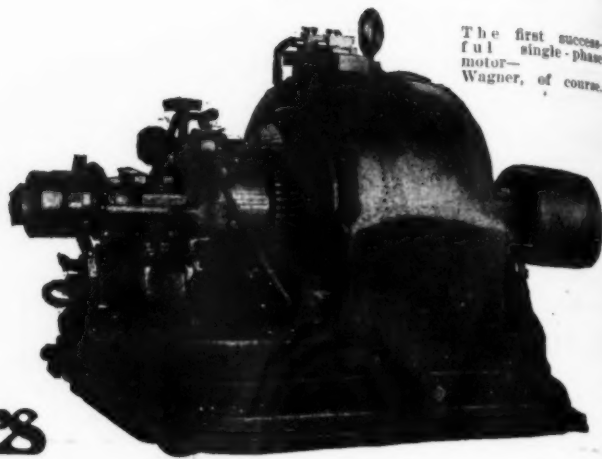
Textile motors, therefore, cannot be bought like so much merchandise. No matter how reliable and efficient a given lot of motors may be, they would utterly fail to produce the desired results, unless, in the first place, they were properly designed for the service, and secondly, they were properly applied to the machines they are to drive. Only a manufacturer who has had long experience in building motors for textile purposes can either design or apply them properly; and in consequence, when selecting electrical equipment for his mill, a textile manufacturer should give careful consideration to the qualifications of the organization that is to supply the equipment.

In determining the ability of any organization to perform a given service, the most important factors are its past experience and its present facilities. In both respects, the Westinghouse Electric and Manufacturing Company shows itself able to render the highest service to the textile manufacturer.



1. Double Roller "Pillar" Driven Individually by a Westinghouse Motor.

Wagner Single-Phase Motors



The first successful single-phase motor—Wagner, of course.

of today are direct descendants of the first commercially successful single-phase motor.

If lineage, ancestry, means anything to you, the Wagner Single-phase Motor must appeal to you as the result of years of experimentation and experience to constantly improve on the first motor.

And yet, though the design has been improved, some of the first Wagner Motors built are running today and giving good and economical service. It's the Quality that makes them dependable; that assures you of constant service. It will pay you to investigate.

Let us send Bulletin 1108 and 1118 Single-phase and Polyphase Motors.

Wagner Electric Manufacturing Company,
Saint Louis, Missouri

Electrical Machinery Repaired

GENERATORS—ARMATURES—TRANSFORMERS



Burned Out Motors and Generators Rewound. High Grade Armature Rewinding. Prompt Service. Workmanship Guaranteed.

CHARLOTTE ELECTRIC REPAIR CO. Charlotte, N. C.
The Best Equipped Electrical Repair Works in the South

Specialists

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Electrical Instruments
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Accurate Machine Parts

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Machinery, "Westinghouse"

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Plants "Lunkenhimer-equipped" are safe from the danger incident to a bursted tube, shell rupture or other internal accident because a sudden reduction in pressure in one of the boilers will cause the

LUNKENHIMER Non-return Safety Boiler Stop Valve

to instantly close and isolate the disabled boiler from the others in the battery, and the valve will not again open until the pressure in the boiler is equal to that in the steam main. Neither can steam be turned into a boiler that has been cut out for cleaning or repairs, as this valve cannot be opened by hand. It can, however, be positively closed at any time.

Its design incorporates many

desirable features, including the interchangeability of all parts. This permits the repair or replacement of a part in case of breakage or wear.

Users should follow this principle when necessity requires, thereby conserving their valve equipment, a practice which is essentially necessary to our success in the war.

THE LUNKENHIMER CO.
"QUALITY"

Largest Manufacturers of
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in the World

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OUR "WAR-PERIOD" APPEAL

ENGINEERING
APPLIANCES ARE THE
WAR ESSENTIAL

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must be adjusted to war
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specifications to requirements
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Standard 9" & 9" Series Shapes
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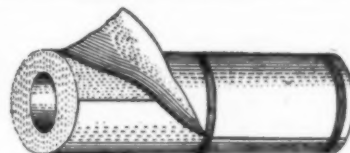
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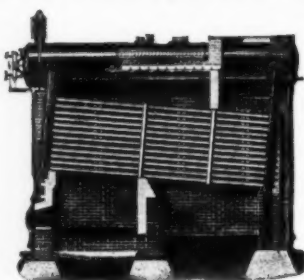


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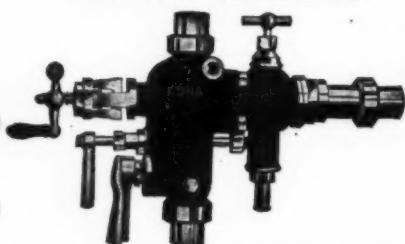
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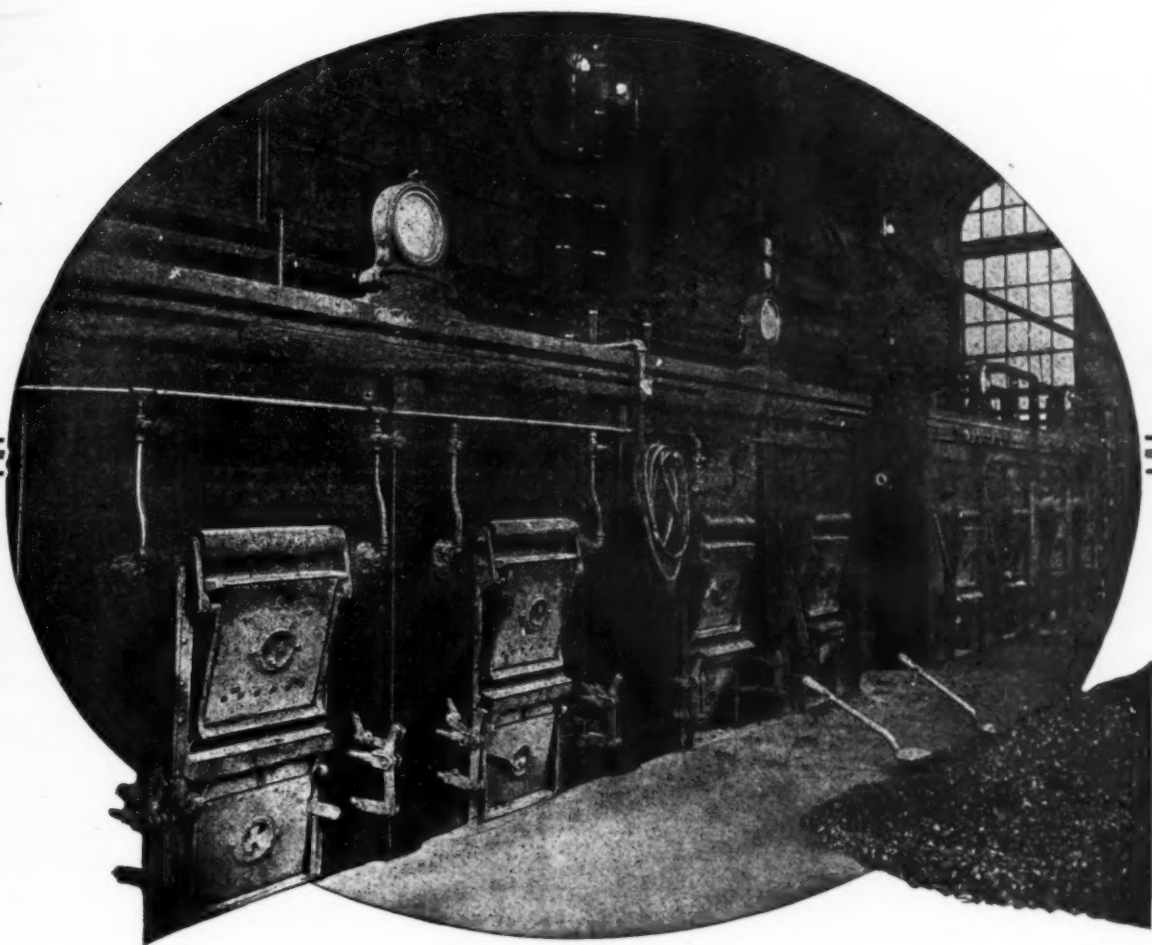
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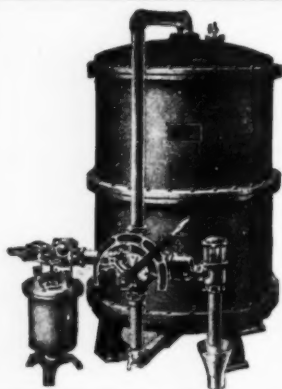
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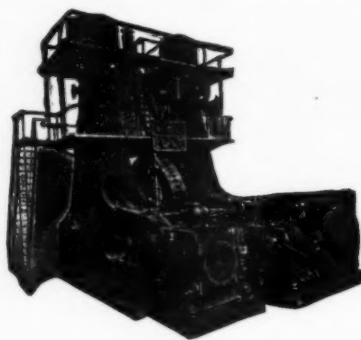
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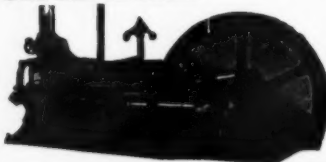
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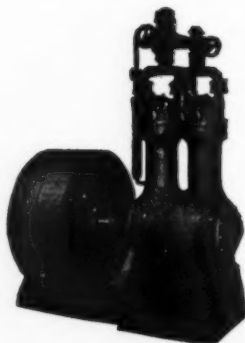
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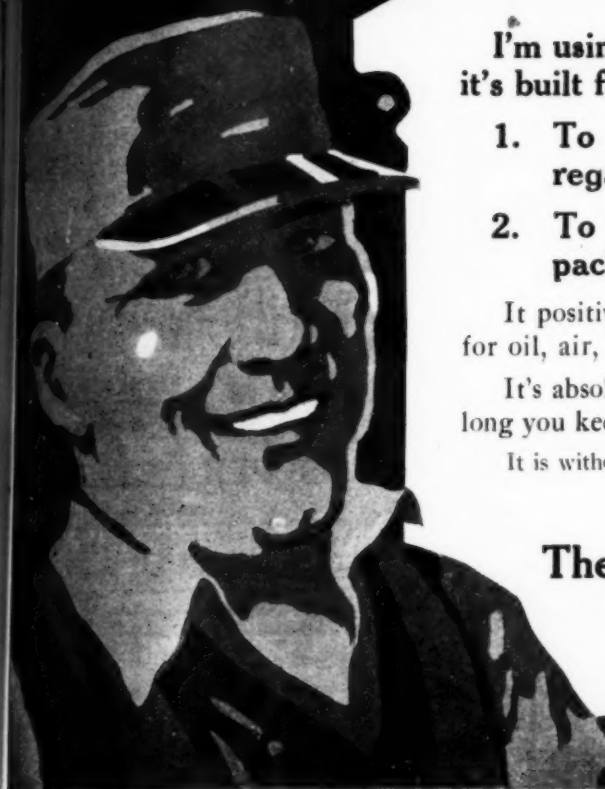
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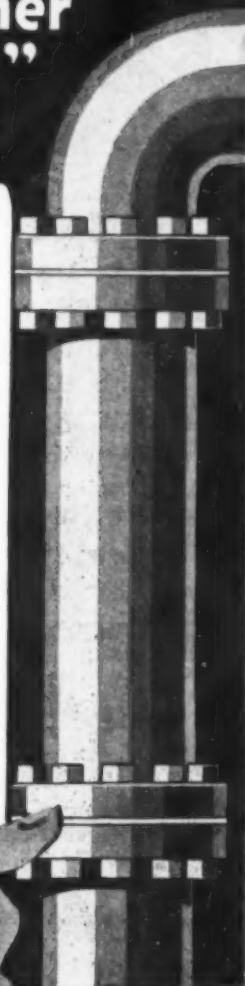
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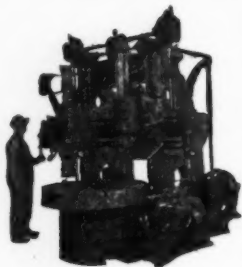
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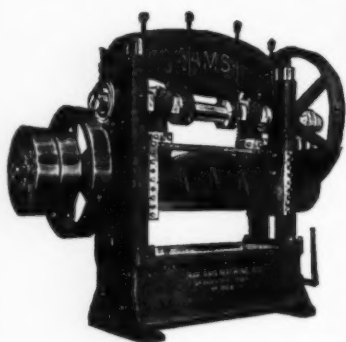
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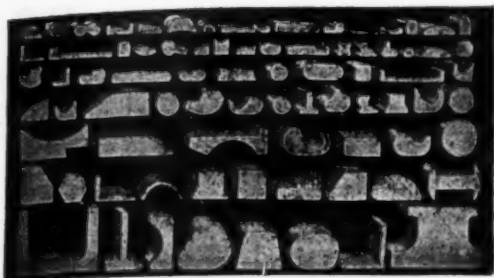
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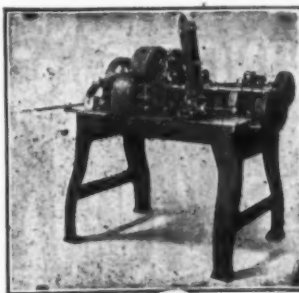
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We make saws of all kinds—Band, Circular, Drag, Hand, Hack, Metal and Kwik Kut Metal Cutting Machines.

ATKINS SAWS are made from "Silver Steel"—our exclusive formula—"The Finest on Earth."

This is an argument for you to try them.

WRITE FOR OUR COMPLETE CATALOG

E. C. ATKINS & CO. Inc., The Silver Steel Saw People

Home Office and Factory, Indianapolis, Ind. Machine Knife Factory, Lancaster, N. Y. Canadian Factory, Hamilton, Ont.

Branches carrying complete stocks in all large distributing centers, as follows:

Atlanta
Chicago

Memphis
Minneapolis

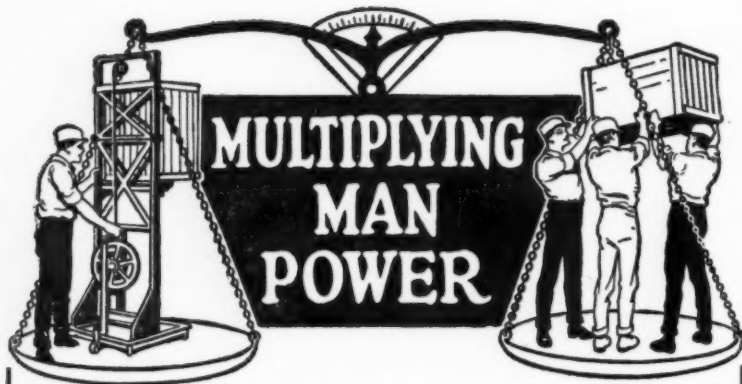
New Orleans
New York City

Portland, Ore.
San Francisco

Seattle
Vancouver, B. C.

Sydney, N. S. W.
Paris, France





THE Economy Tying Machine makes one man equal to three or more in lifting power. Thus it helps to relieve the labor shortage due to inefficient methods.

ECONOMY TIERING MACHINE

Reaches Any Height With Perfect Safety

One man can lift as much as 1000 pounds to the ceiling—or even 2000. Awkward packages that ordinarily require two to eight men can be handled by one equipped with an Economy. Safety devices protect him and the load.

Think of the saving in wages! The saving in space! The saving in time! The release of non-productive men to important duties! Your investment in an Economy means more than an investment. It's a help to your country, too.

Nine Overwhelming Features

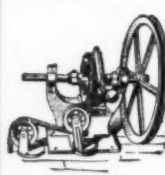
The Economy will not tip over with its load. This is but one of nine big qualities. Write at once for full particulars of all nine.

ECONOMY ENGINEERING COMPANY

Makers of Economy Steel Barrel Racks

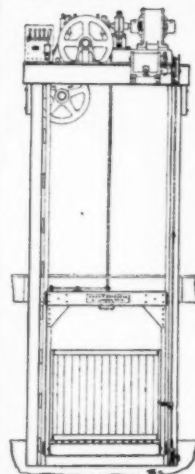
413 S. WASHTENAW AVE., CHICAGO
85 E MURRAY ST., NEW YORK

Foreign Agents: Brown Portable Conveying Machinery Co., Chicago



Safety, Simplicity and Durability
are the keynotes in the construction of our
DUMBWAITERS
We Make Them for All Purposes. Send for Catalog
ELEVATORS and SIDEWALK LIFTS
J. G. SPEIDEL
READING, PA.

FREIGHT ELEVATORS ELECTRIC and HAND



Dumbwaiters
Electric and
Hand

Newspaper
Lifts, Auto-
matic Plate
Droppers

Guide Lubricators
Elevator Safety
Switches

Write for circulars
The
Owen T. Snyder
Company
Columbus, Ohio



METALINE

(Trade Mark Reg.)
Most Reliable, Positively Oilless,
Least Wearing, No Fire Danger.
BUSHINGS for LOOSE PULLEYS
**THE METALINE
COMPANY**

Divided Flanged Bushing
Corporate name changed from North American Metaline Co.
West Ave., Cor. 3rd St., Long Island City, N. Y.

If you wish to keep posted on the
progress of the South, read the
MANUFACTURERS RECORD
Price \$6.50 a year, six months for \$3.50.



FORD
TRIBLO
A Chain Hoist that
superior in service
years. Has patent
LOOP and Chain
GUIDE, and many
parts and a motor
for speed.
Write for new Catalog
**FORD CHAIN HOIST
MANUFACTURING CO.**
24 & Diamond St., Phila.

GODFREY COAL CONVEYOR

Single rope installation.
Storage 1000 tons
per 100 feet.



One man operator. Handles all sizes of
coal. 10 tons per hour. Can be moved at
any angle from railroad switch.
JOHN F. GODFREY, Elkhart

SAND FOR CONCRETE

Washed and Screened. Equipped to fill
large orders. Prompt Service.
MACON FUEL & SUPPLY CO.
MACON, GA.

Impervious Face Brick

"Ratine" "Cravenite"
Common Building Brick
W. E. Dunwoody, President
STANDARD BRICK COMPANY
Macon, Ga.

"And in no other type of carrier are the elements for the quick and silent handling of large capacities of various materials so effectively combined as in the belt conveyor."—C. M. S.

No Stronger Endorsement or Argument Than the Above Is Needed for

JEFFREY RUBBER BELT CONVEYERS

"Our" Century Belts, as well as the carriers used, are designed especially for the hard service of conveying Rock, Ores, Stone, Gravel, Coke, Coal and other heavy materials, and therefore are a composite of the best of materials and practical engineering service.

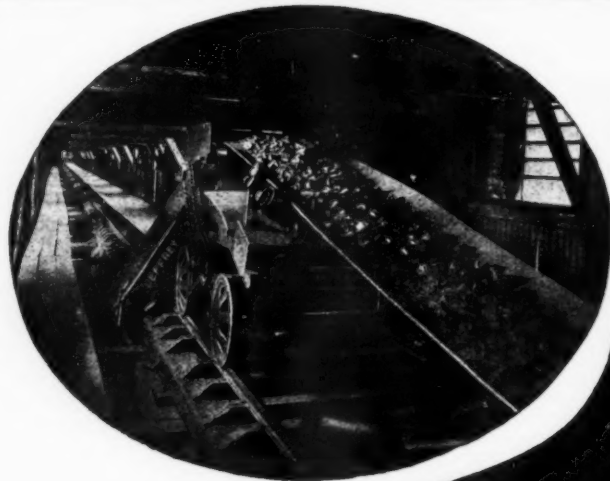
The shorter lengths of Flat or Troughed Belts, at moderate speeds are well adapted to, and are being economically used everywhere for packages, bags, barrels, boxes and general merchandise.

The various types of Jeffrey Trippers for automatically distributing over a given space or discharging materials at any fixed point are so designed as to occupy minimum space above the belt; operate with minimum horse-power, and insure a minimum of care and upkeep.

Our New Belt Conveyor Catalog No. 175-E, picturing many applications and installations and fully illustrating their design and construction will soon be off the press. Send for your copy.

THE JEFFREY MFG. COMPANY
926 North Fourth Street COLUMBUS, OHIO

Handle it Mechanically

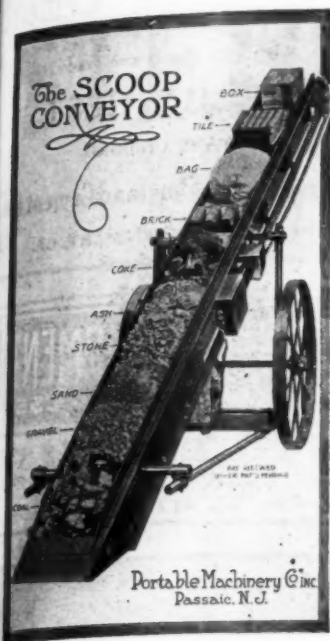


Handling Coal to
Storage Bins in
Power Plant.



Note how small
and compact is
Jeffrey Self-Propelling
Automatic Reversible
Belt Tripper
built.

A series of Light
Portable Belt
Conveyors for
docking Barges in
Warehouse or
Dock. Can be
driven in any
section.



**WILL
DO
THE
WORK
OF
FROM
6
TO
12
MEN**

Hundreds of manufacturers are now using the Scoop Conveyor to load and unload cars, trucks and wagons and to stack into storage piles or bins.

Ask for further information

PORTABLE MACHINERY CO., Inc.
PASSAIC, N. J.

Vice-President Dickson Said

To his men in the great Midvale Steel & Ordnance Co.

"HOW MANY OF YOU HAD TO GET OUT AND MAKE YOUR LIVING WHEN YOU WERE ONLY 11 YEARS OLD?"

And hundreds held up their hands.

"SO DID I," cried Mr. Dickson as he held up his hand.

And I saw a light come into every steel worker's eyes even from the gas man up to the "boss."

AND THE NEXT WEEK MIDVALE MEN BROKE ALL MILL RECORDS.

The miners out in Colorado said to Mr. John D. Rockefeller, Jr.,

"If you had come out here and let us know you, there never would have been any labor trouble."

A man was reviling another man very bitterly.

"Why, I didn't know you knew Brown," said a friend.

"I don't," replied the reviler. "You can't hate a man you know."

What has all this got to do with Ridgway Elevators? Nothing at all. Except to say this:—

ALL MISTAKES IN MEN OR MACHINES OR PROCESSES ARE BECAUSE OF "THE DON'T KNOW."

When your men know you they will love you if you are lovable.

And when you know the Ridgway Elevator you will

"Hook 'er to the Biler"

The Ridgway & Son Co.

COATESVILLE, PA.

Elevator Makers to Folks Who Know



Elevator in Large Soap Factory in Jersey City



Double Geared



Direct Acting

Warsaw Elevator Company

T. FRANK WILHELM, Manager

Special Attention Given to Repairs

Office and Warehouse

Mercer, Grant and Water Sts. BALTIMORE, MD.

GRINDING WHEEL DRESSERS

of Every Description

"HUNTINGTON"—"DIAMO-CARBO"—"SHERMAN"

DIAMONDS

The Desmond-Stephan Dresser Co.

URBANA, OHIO

ELEVATORS MOFFATT MACHINERY MFG. CO.

HAND—BELT—ELECTRIC
AND HYDRAULIC

MACHINISTS AND FOUNDERS
CHARLOTTE, N. C.

American Elevators Built by AMERICAN ELEVATOR & MACHINE CO. INCORPORATED LOUISVILLE KY.

Standard for a third of a century.
Passenger and Freight.
All Powers.

TURNER ELEVATORS
K. C. ELEVATOR MFG. CO.
(Established 1881)
2601-3-5-7 Madison Ave., Kansas City, Mo.



Long Life
Bushings
In Spite of Neglect

Oil-less

"NIGRUM"
(Impregnated Wood)

"BOUND BROOK"
(Graphite-and-Bronze)

Bushings

Trade Mark Reg. U. S. Pat. Off.

All genuine Graphited Oil-less Bushings have always been made at Bound Brook, U. S. A.

BOUND BROOK OIL-LESS BEARING CO.

Bound Brook

New Jersey

Specialists in the manufacture of Oil-less Bushings for more than a third of a Century

W
W

Wherever a Hoist
Can Be Used

WRIGHT

HIGH SPEED CHAIN

Hoists

will do the work quickly.
They will outlast and out-
lift any other.

Let us send catalogue R-16.

WRIGHT MFG. CO.
LISBON, O.

W
W

Raising Flange in a Foundry with Wright High Speed Hoist.



The picture shown above is very simple—merely a motor-truck and a concrete road;

And yet, simple as it may appear, it typifies at once the South's greatest need and greatest opportunity—the readjustment of the road surface to the new freight vehicle for the hauling of heavier loads with greater dispatch at reduced power cost and lessened wear on the road.

The above view duplicated on all main highways in the South will mean an unparalleled development in agriculture and commerce.

Public spirited citizens desiring to inform themselves on how to permanently readjust roads to meet new conditions in their respective communities may obtain such information by addressing:

Standard Portland Cement Co.
BIRMINGHAM, ALA.



**A
Concrete
Road
Is
Permanent**

SAVES GASOLINE

CONNECTS
FARM WITH CITY

NO MUD NO DUST

Write us for free copy
"Concrete Highways"

DIXIE PORTLAND CEMENT CO.
CHATTANOOGA, TENN.

You Who Are About to Build

For Permanent Construction
To Eliminate Maintenance

Use Clinchfield Portland Cement



**CLINCHFIELD PORTLAND
CEMENT CORPORATION**
Sales Offices and Mills, Kingsport, Tenn.

Branch Sales Offices:

CINCINNATI, O., 1306 Union Trust Building.
SAVANNAH, GA., 413-415 American Bank and Trust Bldg.

Southern States Portland Cement



We produce only one grade

THE HIGHEST

ALWAYS UNIFORM

Southern States Portland Cement Co.

Office and Mills—ROCKMART, GA.



**IMPERIAL WELDING
AND CUTTING EQUIPMENT**
OXY-ACETYLENE PROCESS

Welds everything in metal—cuts anything in steel or wrought iron. We can give QUICK WELDING SERVICE in our own shop. An aid to manufacturers having Government contracts. Full data on request. Write for Free Catalog.

The Imperial Brass Mfg. Co., 507 S. Racine Ave., Chicago

THE HARFORD TALC CO., Inc.

MINERS AND MANUFACTURERS OF

TALC PRODUCTS

1512 N. PAYSON ST.
BALTIMORE, MD.

TALC FOR PULVERIZING
METAL WORKERS
ROLLING MILL CRACKS
CUBES BLANKS

Marine "VITA" Glue

Sets and stays in seams.

Has tenacity and vitality.

For samples and prices, write to

BINNEY & SMITH COMPANY

81 Fulton Street, New York

Southern Minerals Corporation

Miners and Shippers of

BAUXITE

MANGANESE

IRON

PROPERTIES: Elizabethton, Carter Co., Tenn.

OFFICES: 20 Beacon St., Boston, Mass.



ANCHOR POST FENCES

Unclimbable, rustless and fire-proof chain link woven steel fences. Unequalled for durability and protection. See our display advertisements in the first and third issues each month.

Catalogs or Counsel

ANCHOR POST IRON WORKS: 167 BROADWAY
NEW YORK, N.Y.

The one scale treatment you can rely upon is

**DIXON'S PIONEER GRAPHITE
ECILER**

It lessens the time for cleaning, increases steaming capacity, reduces fuel consumption. Write for Booklet 80-T.

Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY
Jersey City, N. J. Established 1827



WELLER MFG. CO.

Designers and Manufacturers of
ELEVATING, CONVEYING AND POWER
TRANSMITTING MACHINERY

Concrete Mixing Plants

Storage Bins and Car Unloaders
Handling and Measuring Devices

DEVERELL, SPENCER & CO.

Southeastern Sales Agents

GARRETT BUILDING

BALTIMORE, MARYLAND

August 22, 1918.]

OPEN HEARTH QUALITY STEEL BARS

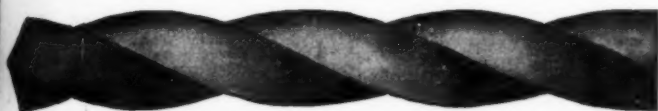
For Manufacturing Purposes

We make all grades of steel to meet various trade requirements, such as Dead Soft Welding and Forging, Threading or Bolt Stock, Soft and Medium Merchant or Machine Steel, Soft Standard, Medium Hard, and High Carbon Steel Bars.

ALSO

CONCRETE (ROLLED IN ACCORDANCE
WITH MANUFACTURERS
STANDARD SPECIFICATIONS)

STEEL BARS FOR REINFORCING CONCRETE
COLD TWISTED SQUARE BAR



Cold Twisted Squares, Plain Squares, and Plain Rounds.

We make soft, medium and hard or high carbon concrete bars, rolled from new open-hearth steel billets, which we produce from high-grade pig-iron, made in our own blast furnace.

Can furnish in any lengths specified from 1 to 60 feet.

Please let us hear from you when in the market

GULF STATES STEEL COMPANY

General Sales Offices

Works
ALABAMA CITY, ALA.

BIRMINGHAM, ALA.

HAVEMEYER BARS

"Every Pound Pulls"

By Using

HAVEMEYER BAR SERVICE

YOU GET

IMMEDIATE SHIPMENT

OF YOUR REINFORCING STEEL

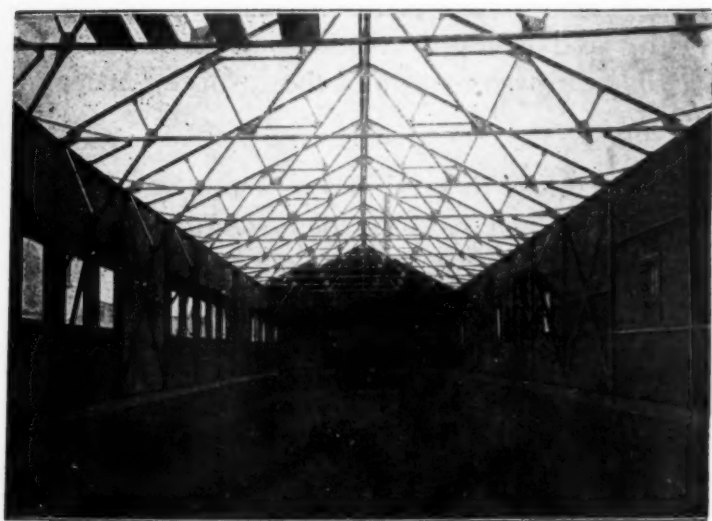
FROM OUR NEAREST WAREHOUSE

Birmingham warehouse carries the largest stock of reinforcing bars in the South—all sizes—rounds and squares. Address Birmingham Office.

CONCRETE STEEL COMPANY
42 Broadway, NEW YORK

Southern Office: Birmingham, Ala., Brown-Marx Bldg.

DISTRICT SALES OFFICES:
CHICAGO, ILL. (Merchandise Bldg.) BOSTON, MASS. (7 Water Street) PHILADELPHIA, PA. (Pennsylvania Bldg.) YOUNGSTOWN, O. (P. O. Box 84) SYRACUSE, N. Y. (Union Bldg.)
FABRICATING SHOPS AND WAREHOUSES:
YOUNGSTOWN, CHICAGO, BIRMINGHAM, PHILADELPHIA, NEW YORK, BOSTON
AGENCIES AND STOCKS IN PRINCIPAL CITIES



"STEFCO" Foundry Building, showing side sections and trusses before roof sheets are put on.

"STEFCO"
Ready-Made
INDUSTRIAL
Steel
Buildings

"STEFCO"

Steel Buildings are not of the Light Type—but are **STRONG—RIGID—DURABLE**

They are PERMANENT buildings—but have the added advantage also of being readily taken apart, without loss of material, and re-erected on another site, as one building, or into various buildings—because of the fact that they are made of "STANDARDIZED" interchangeable sections.

The fireproof feature means much in the lowering of insurance rates.

These buildings are factory painted (high-grade paint) two coats—interior and exterior. We make what we call the "STANDARD" type—and one that we call "CHICAGO" type, which is still heavier.

DIMENSIONS

Our "STANDARD" type has side-walls that are 8 ft. or 10 ft. high to eaves—and the widths are 10 ft., 12 ft., 16 ft., 20 ft. and 24 ft. (single span trusses). Our "CHICAGO" type has side-walls that are 10 ft. or 12 ft. high to the eaves—and the widths are 24 ft., 30 ft., 36 ft. and 40 ft. (single span trusses). Greater widths may be had in combinations of the aforesaid multiples, in which case center columns would be employed. Any length may be had in multiples of 8 ft., and the buildings may be increased in length, later on, by adding STANDARDIZED sections from our stock.

STRONGLY RIVETED

The trusses are strongly RIVETED, and likewise are the corrugated steel sheets of the walls firmly RIVETED to the steel framework—before leaving our plant. We ship these buildings in sectional units, so that they may be easily erected on your site by ordinary labor, by bolting together the finished trusses and side-sections, and slipping the roof sheets into place.

Write Us Today for Illustrated Folder

STEEL FABRICATING COMPANY
CHICAGO HEIGHTS, ILL.

Concrete Can Be Made Age-Proof

No. 2 in a series of advertisements on the

COMMERCIAL UTILIZATION OF BLAST FURNACE SLAG.

The selection of a coarse aggregate for concrete seems often dependent upon the most available source of supply, without thought of the strength or permanence of the material, bulk being apparently the only necessary qualification.

Many builders use ashes and cinders; others broken bricks, stones and yard refuse; still others use broken stone and unscreened gravels.

When exposed to fire, a building thus erected disintegrates and crumbles. Rains penetrate the walls with apparent ease, and the corroding influence of poor concrete proves injurious to the steel reinforcement after a comparatively short length of service.

Since, however, it has been found that the reliability of a reinforced concrete structure is due largely to the form of coarse aggregate used, blast furnace slag has come into large use.

And with its use reinforced concrete is recognized as an approved method of fireproofing and age-proof construction.

By the use of slag as an aggregate the structural solidity of concrete is materially increased. The weight of slag concrete is fifteen to thirty per cent. lighter than that in which stone or gravel is used as an aggregate.

Slag proves an effective barrier to moisture and is highly resistive to temperature changes. It resists fire because it has already gone through the fire of the furnace—hotter far than any conflagration.

The sulphur content of slag, which has been reduced to sulphides by the intense heat within the blast furnace, acts as a preservative for the steel reinforcement, eliminating all probabilities of corrosion. Due to its chemical composition, it is impossible for slag to disintegrate—it improves with age.

Within haulage radius from blast furnaces slag concrete has no economical equal—its first cost, whether lower or higher, is its last cost—no replacements or patching of cracks.

The abundant supply of this material at most furnaces insures prompt deliveries as well as a wide and economic distribution.

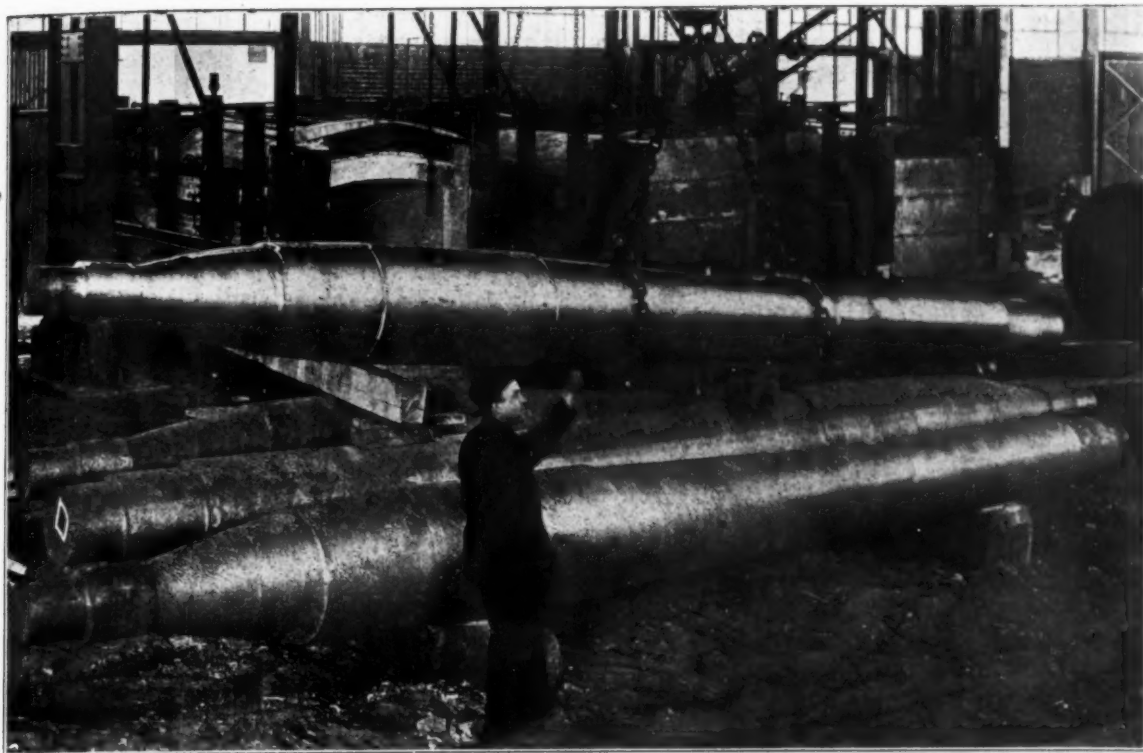
Address inquiries to

Carnegie Steel Company

464 Frick Building Annex

Pittsburgh, Pa.

CAMDEN



You are THINKING

that you will know what forgings are embraced by the term

CAMDEN FORGINGS

I am thinking that each week the shops make some forging never before produced by them, and that its present **productive** facilities range from a plain round bar weighing 100 lbs. to a forging 80,000 pounds.

We are thinking that the next and logical procedure is to find our common meeting ground.

CAMDEN FORGE CO.

CAMDEN, N.J., U.S.A.

TENNESSEE COAL, IRON & RAILROAD Co.

General Offices:
Brown-Marx Bldg., Birmingham, Ala.

PRODUCERS OF

OPEN HEARTH STEEL

Blooms Billets Twisted Squares Slabs
Rails Angles Sheared Plates Bars

PIG IRON

Foundry, Forge, Basic
"DeBardeleben" "Ensley" "Alice"

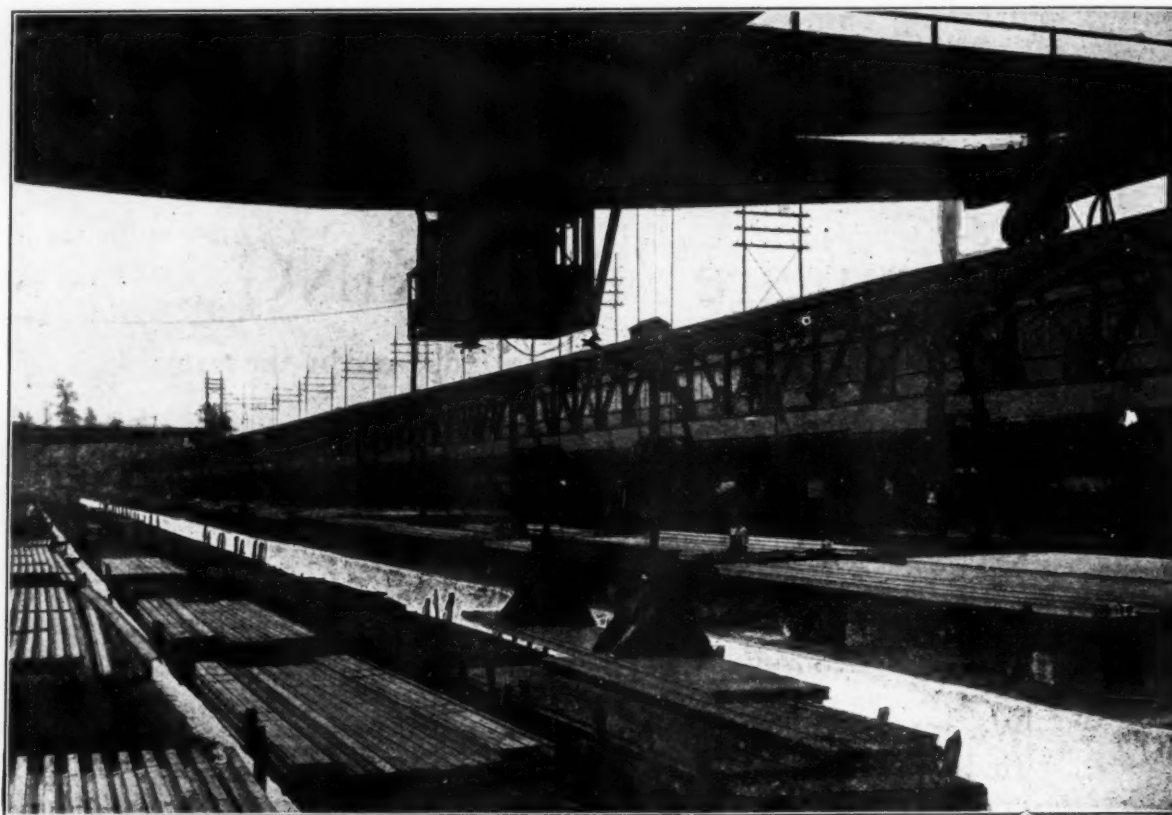
Tennessee Special Tool Steel

COAL

Steam, Gas, Blacksmith, Domestic

COKE

Furnace, Foundry, Domestic



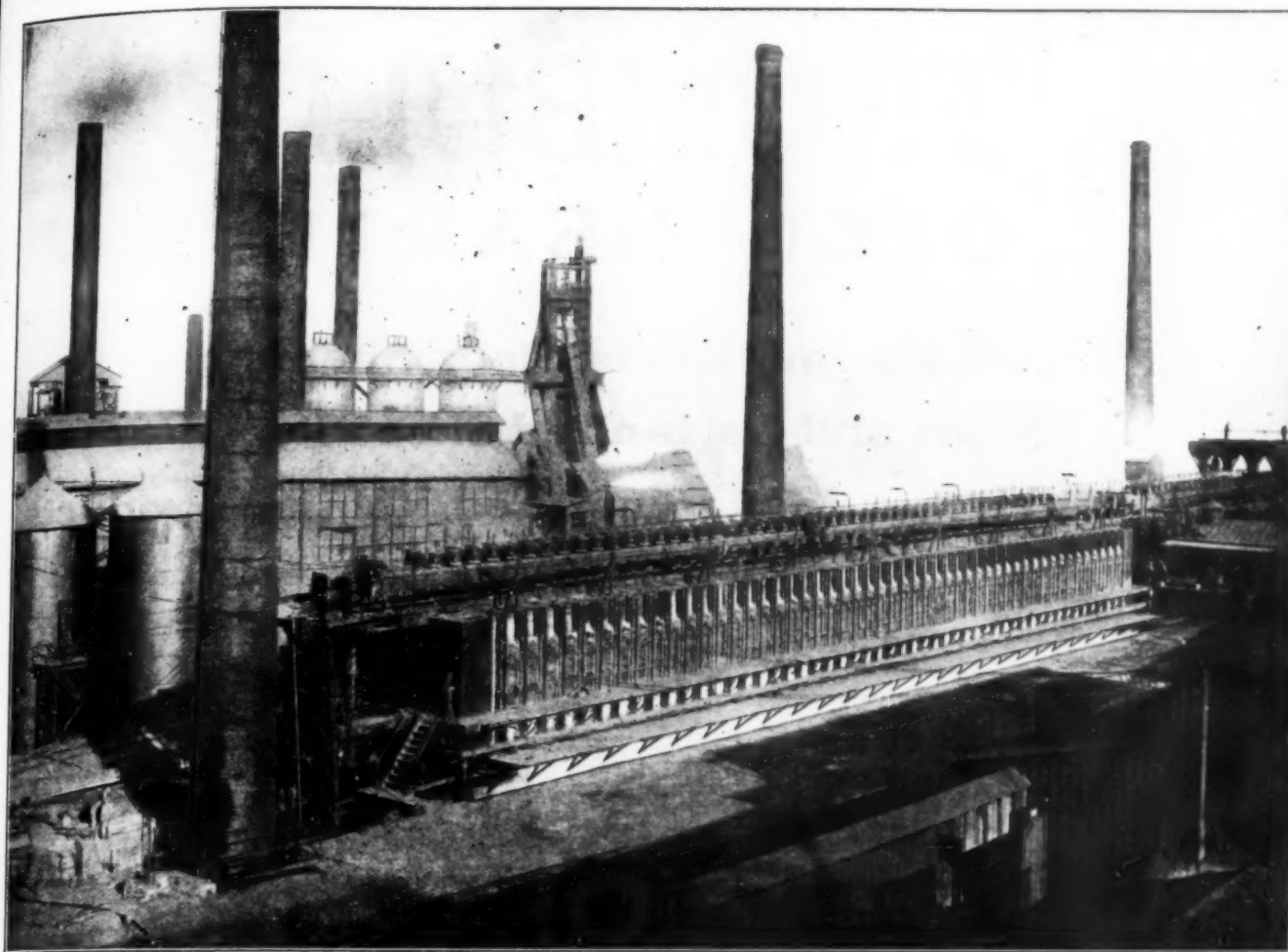
Rail Loading Docks at Ensley Mill. Showing Modern Methods of Rail Handling.

BRANCH OFFICES:

Chicago	Boston	Buffalo	New Orleans	St. Louis	Cincinnati	Cleveland
Pittsburgh	Denver	Detroit		St. Paul	New York	Philadelphia

Pacific Coast Representatives: United States Steel Products Co., San Francisco, Seattle, Portland, Los Angeles

Export Representatives: United States Steel Products Company, New York City



By-Product Coke Ovens at the Plant of the Cambria Steel Company

**WE MAKE
OUR OWN COKE FROM OUR OWN COAL IN
OUR OWN OVENS**

**AND SELL
THE FOLLOWING BY-PRODUCTS**

Ammonia Liquor
Ammonium Sulphate
Benzol 90%
Benzol C. P.

Toluol C. P.
Xylol C. P.

Crude Solvent Naphtha
Refined Solvent Naphtha
Crude Naphthalene

All quotations, acceptances and shipments of orders, based on Government requirements

**Midvale Steel and Ordnance Company
Cambria Steel Company**

General Sales Offices:

Widener Building, Philadelphia, Pa.

District Sales Offices:

Atlanta	Boston	Chicago	Cleveland	Detroit	New York	Philadelphia
Pittsburgh	Cincinnati	St. Louis	San Francisco	Salt Lake City	Seattle	

"We Want You to Become Better Acquainted with Us" Series—No. 22

TRUMBULL OPEN HEARTH

Ingots, Blooms, Billets, Slabs, Sheet Bars

Black and Galvanized Sheet Steel

Galvanized and Painted Formed Roofing Products

Coke Tin Plate

Hot and Cold Strip Steel

THE TRUMBULL STEEL COMPANY

GENERAL OFFICE : : : : : WARREN, OHIO

MERCHANT BAR IRON

————— FOR —————

**Shipbuilding, Dry Dock and
Other General Work**

We Invite Your Inquiries and Specifications

The Milton Manufacturing Company
MILTON, PENNSYLVANIA

STEEL

WHEN YOU WANT IT

We are specializing on Motor Truck and Tractor Steels and 'twill pay you to get in touch with us right away. Our stocks are heavy now, and shipments can be made quickly.

ABORN MOTOR TRUCK STEELS

should be secured now. Get these steels under your roof while you can. We have them, they are yours for the say so; the sooner you say so the better for you. Right now is the time to place your order.

Century Steel Works

Poughkeepsie, N. Y.

Aborn Steel Company, Inc.

34 Clarke St., New York, N. Y.

PHILADELPHIA, PA.
269 Drexel Building.

BUFFALO, N. Y.

520 Marine Bank Building.

ROCHESTER, N. Y.

133 Andrews Street

160

Topping Brothers



50 Warren Street
NEW YORK

Immediate Shipment
from Stock

OF
GENERAL SUPPLIES
FOR
SHIP CONSTRUCTION

Ship Clamps
Planker and Cotton Jacks
Boat Spikes
Chain

Deck Bolts
Clinch Rings
Tackle Blocks
Chain Hoists

RAILROAD SPIKES

TRACK BOLTS

CAULKING TOOLS

SHOVELS AND SCOOPS

BOLTS, NUTS, RIVETS AND WASHERS

BESSEMER

STEEL

OPEN HEARTH

BILLETS, BLOOMS, SLABS, SHEETS, BARS

"Pioneer" Pig Iron

Merchant Bars, Shapes, Skelp, Shafting,
Old Rail Bars, Special Sections,
Mine Rails, Twisted Squares

Merchant Bar Iron, Spikes, Bolts, Nuts,
Washers, Turnbuckles

Standard Black and Galvanized "REPUBLIC PIPE" Line Pipe, Drive Pipe, Tubing and Casing

Boiler SHEARED PLATES Flange
Tank

Republic Iron & Steel Company

General Offices: Republic Building, Youngstown, Ohio

Birmingham New York Cleveland Cincinnati Detroit Chicago Buffalo St. Louis
Pittsburgh Philadelphia Dallas San Francisco

Jones & Laughlin Steel Company

General Offices:
Jones & Laughlin Building
PITTSBURGH

MANUFACTURERS OF
**VARIOUS
STEEL PRODUCTS**

WORKS:
South Side Works Keystone Works
Eliza Furnaces & Coke Ovens Soho Works
Aliquippa Works

BRANCH OFFICES:
Boston Buffalo Chicago
Cincinnati Cleveland Detroit
New York Philadelphia San Francisco
St. Louis Washington

THE BRIER HILL STEEL COMPANY

YOUNGSTOWN, OHIO

Manufacturers of

Bee-Hive and By-Product Coke, Coal Tar, Sulphate of Ammonia, Benzol, Toluol, Xylol, Light and Heavy Solvent Naptha, Napthalene, Ore, Washed Metal, Basic and Bessemer Pig Iron, Low Phosphorus Pig Iron, Forging and Re-Rolling Billets, Slabs, Sheet and Tin Bar, Blue Annealed, Black and Galvanized Sheets, Formed Roofing and Siding, Single and Double Pickled Sheets, Furniture, Automobile and Deep-Drawing Stock, Etc.

STRUCTURAL STEEL ORNAMENTAL IRON

Snead Architectural Iron Works

LOUISVILLE, KY.

Immediate Shipments of All Standard and Bethlehem Shapes

STRUCTURAL STEEL

Machinery of All Kinds
Mill and Building Castings

Engines and Boilers Mine Equipment a Specialty

The Mecklenburg Iron Works

M. I. W.

Charlotte, N. C.

M. I. W.

DIETRICH BROTHERS

Structural and Ornamental Iron and Steel Works

Large Stock of Standard and Bethlehem Shapes

CONCRETE REINFORCEMENTS

BALTIMORE, MD.

BELMONT IRON WORKS

DESIGN
FABRICATE
ERECT STEEL STRUCTURES

N. Y. OFFICE:
32 BROADWAY

MAIN OFFICE AND WORKS:
PHILADELPHIA, PA.

BRIDGE SHOPS
EDDYSTONE, PA.

INTERNATIONAL STEEL & IRON CO.

EVANSVILLE, INDIANA

STANDARD IRON AND STEEL BETHLEHEM
CARRIED IN WAREHOUSE STOCK FOR IMMEDIATE SHIPMENT
STEEL FOR BRIDGES AND BUILDINGS Fabricated Promptly

STEEL CONSTRUCTION

Steel Buildings and Bridges, Oil and Water Tanks, Standpipes, Riveted Pipe, Smoke Stacks, High Pressure Tanks, for Air, Gas and Liquids.

WM. B. SCAIFE & SONS CO. PITTSBURGH, PA.
New York Office, 26 Cortlandt St.

WHITAKER-GLESSNER COMPANY

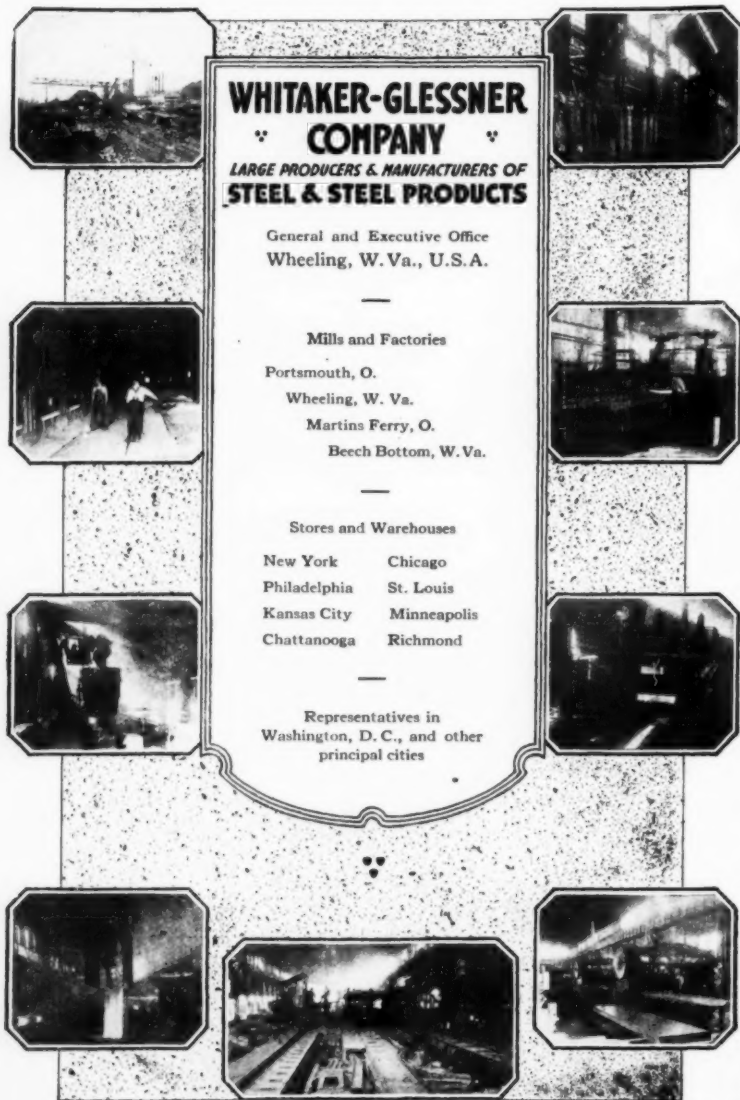
LARGE PRODUCERS & MANUFACTURERS OF
STEEL & STEEL PRODUCTS

General and Executive Office
Wheeling, W. Va., U.S.A.

Mills and Factories
Portsmouth, O.
Wheeling, W. Va.
Martins Ferry, O.
Beech Bottom, W. Va.

Stores and Warehouses
New York Chicago
Philadelphia St. Louis
Kansas City Minneapolis
Chattanooga Richmond

Representatives in
Washington, D. C., and other
principal cities



VIRGINIA BRIDGE & IRON CO.

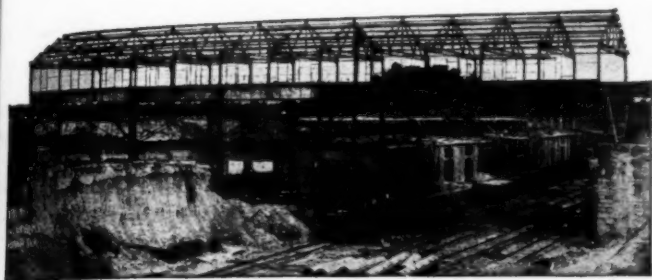
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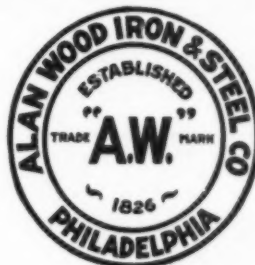
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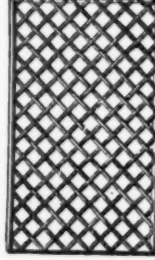


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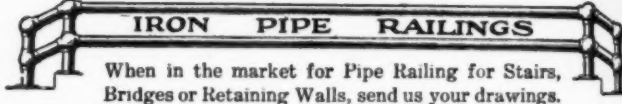
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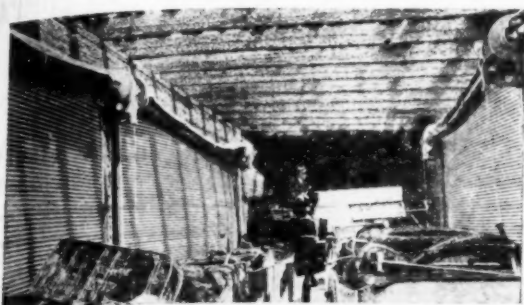
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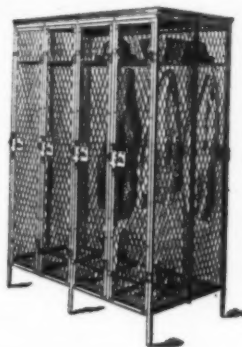
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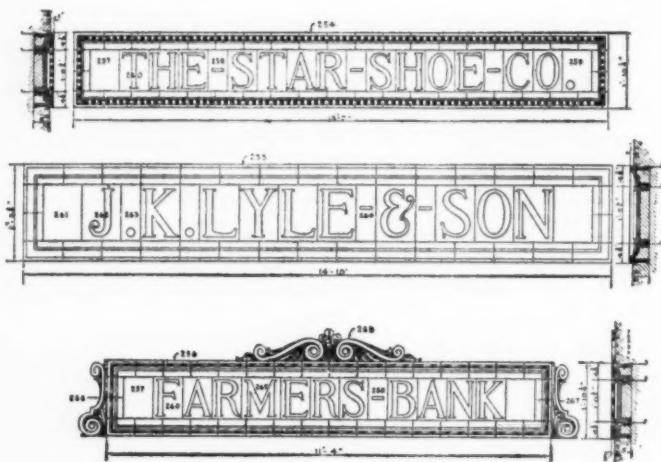
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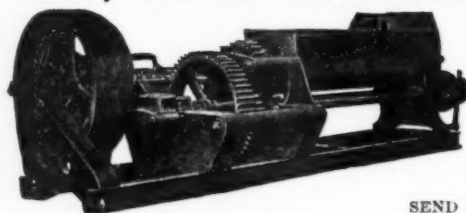
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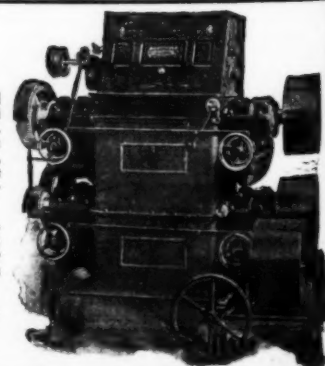
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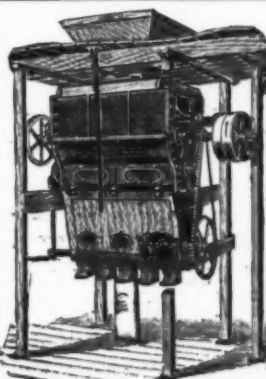
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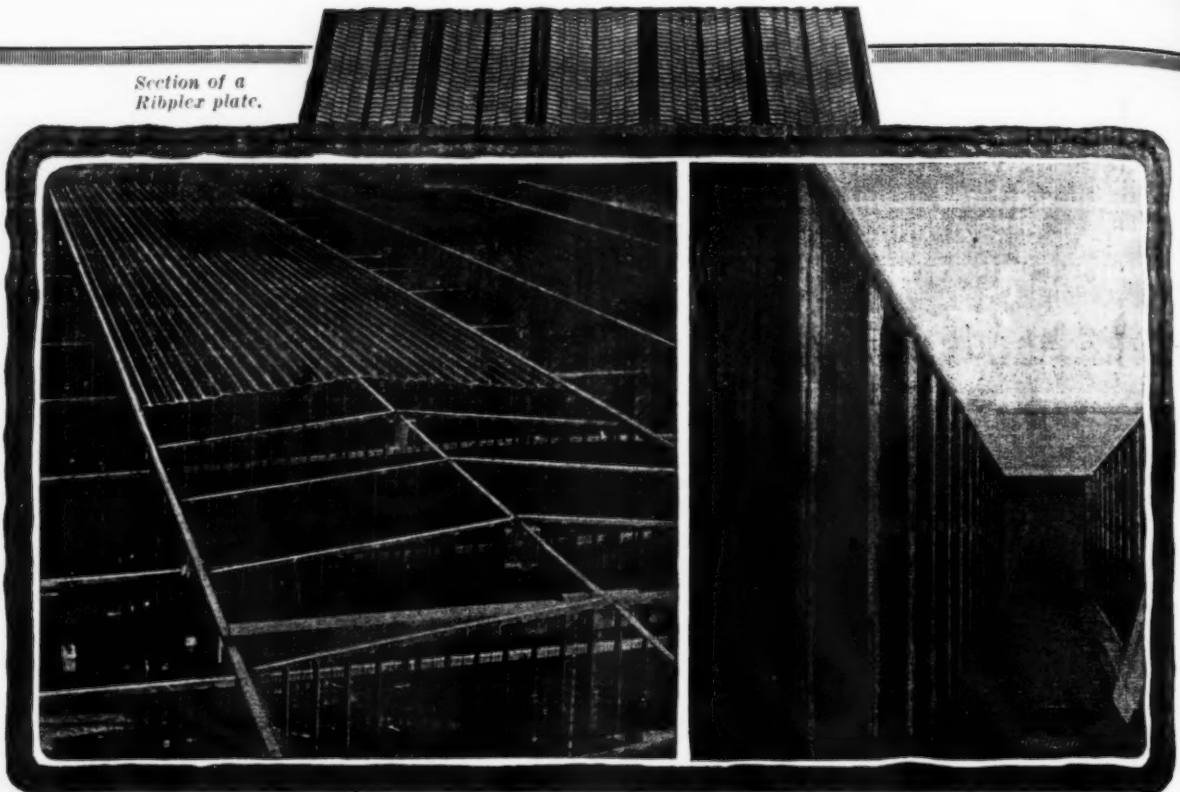
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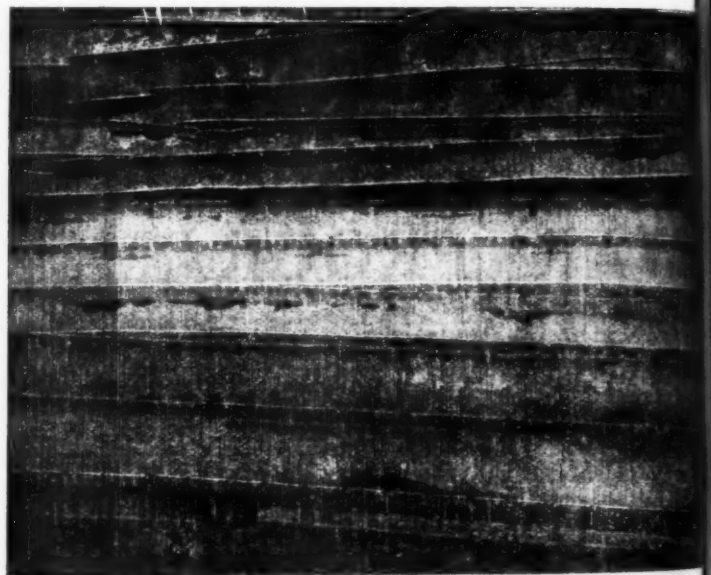
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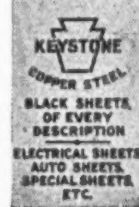
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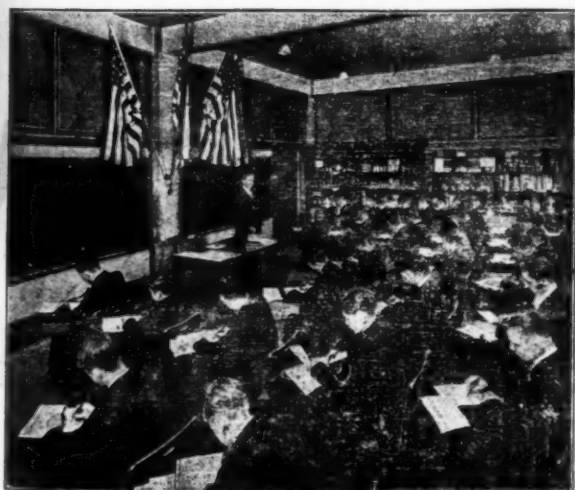
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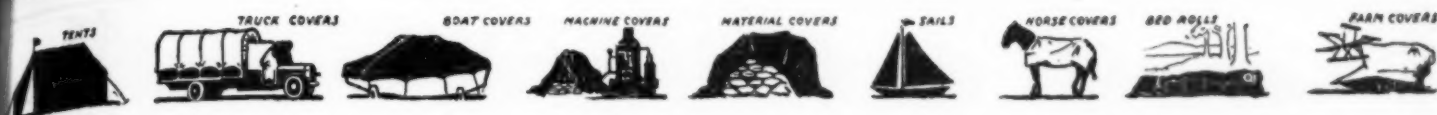
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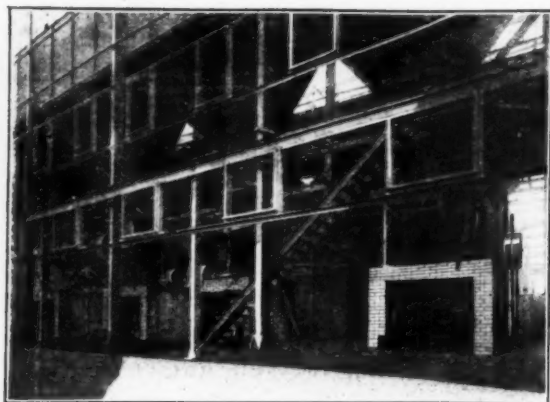
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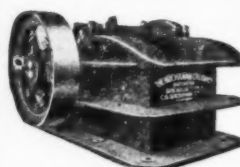
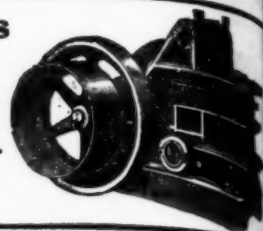
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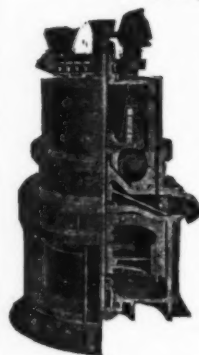
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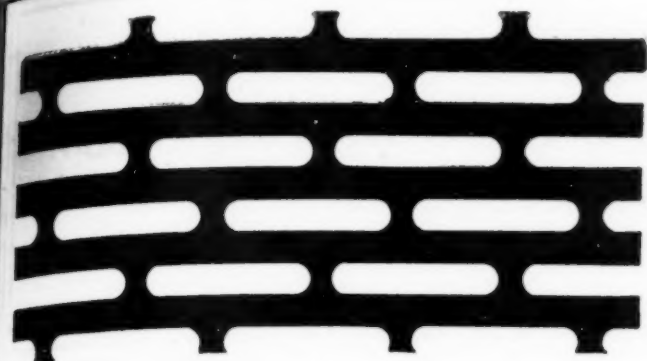
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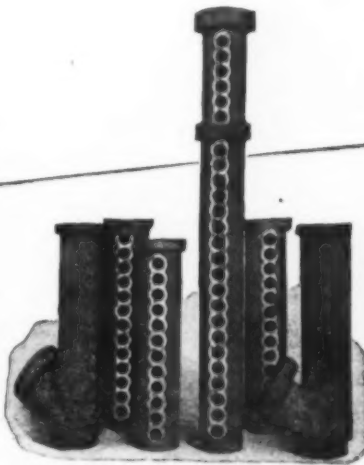
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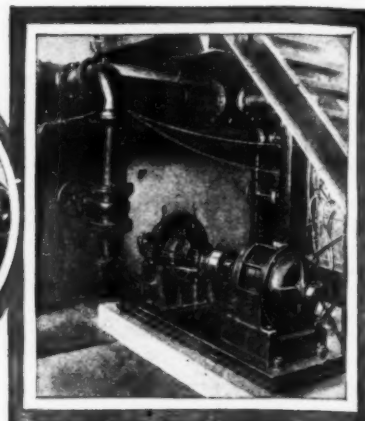
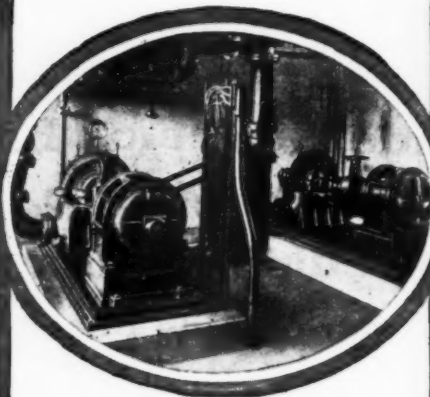
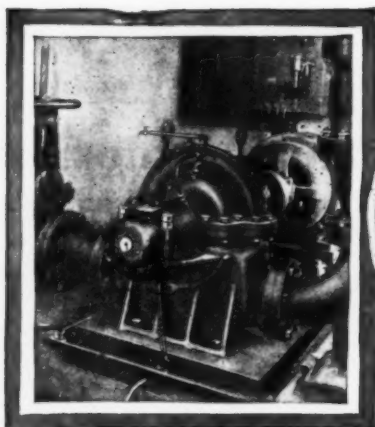


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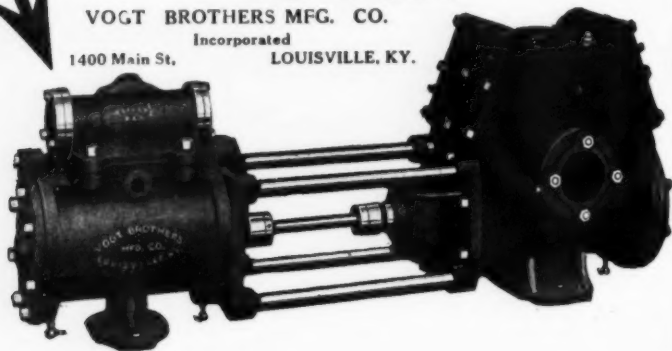
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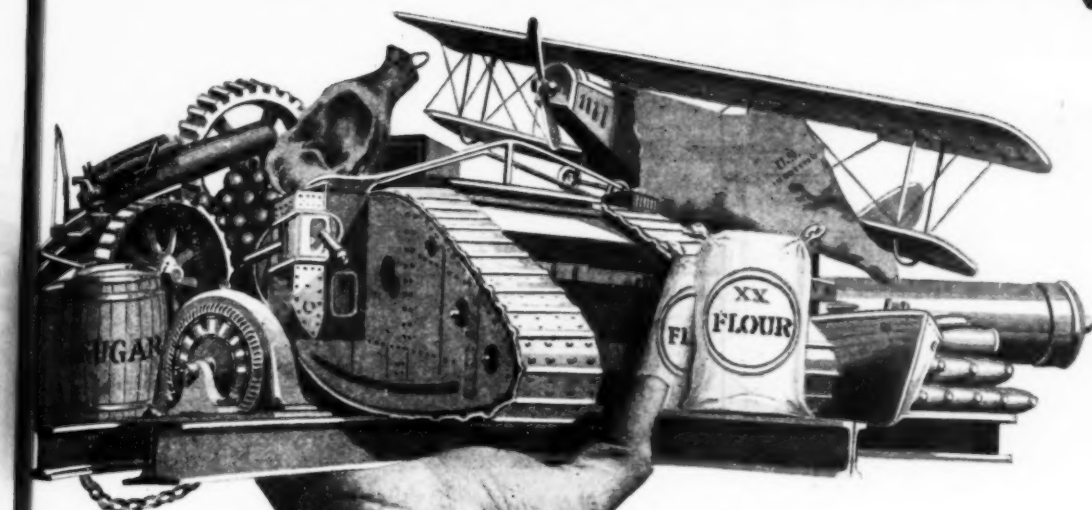
July 15, 1918.

Manufacturers Record, Baltimore, Md.:

Gentlemen—We thank you very much for the information given us in yours of the 10th. I have never before appreciated the vast service that your journal can give, as is illustrated in this instance. You have given me information along a new line of experimentation and given me the names and addresses of a number of manufacturers of this type of machinery, and you have also published my wants in your Bulletin, as well as in the regular issues of your journal, to such an extent that I do not feel that I should accept this service without being a subscriber, so you may enter our name on your lists and send us a bill, and we will remit promptly. I have already had enough information about this one thing to much more than pay me for the price of the journal. I have written several other periodicals of a somewhat similar nature, and while I got courteous replies and some information, I got nothing like what I have gotten from you, and I want to let you know that I appreciate it and am willing to do my "bit" towards upholding such magnificent service.

Very truly,
R. S. TRULOCK,
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OPPPOSED to the "mailed fist" is the mighty arm of industry. Behind the Yankee machine-gunner, the man bucking a racking riveter.

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It is just as necessary to build permanent highways as it is to increase the efficiency of our railways and waterways.

No ONE of these great transportation forces is effective without the aid of the others.

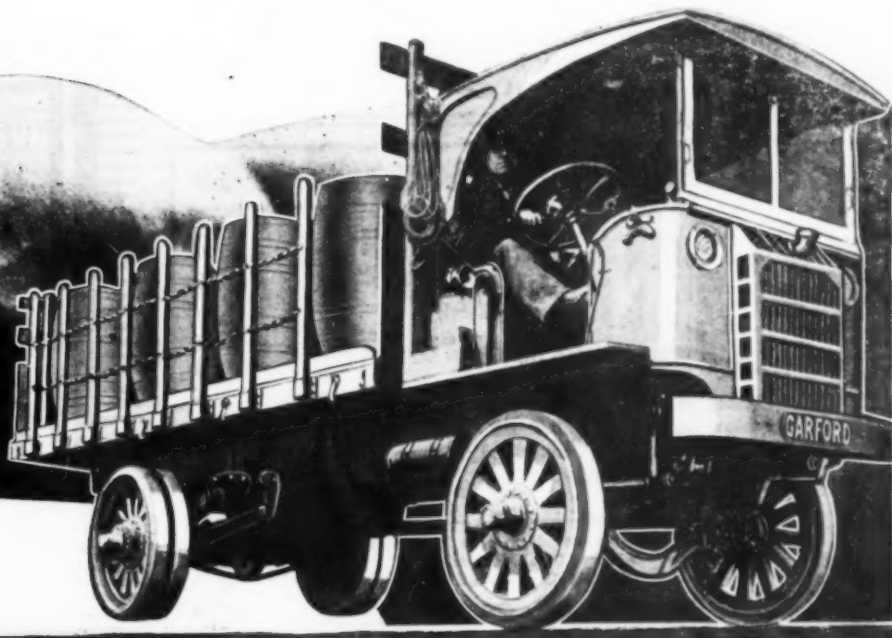
ALL are allied in a common cause—the winning of the war and the meeting of conditions which will face our country afterwards.

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"GERMANY UNPUNISHED WILL BE WHOLLY UNREPENTANT."

THE closing statement of an interesting letter from Mr. Courtenay de Kalb of Stanford University is that "Germany unpunished will be wholly unrepentant." On this point he writes:

"I hope that our people will resist the next peace offensive of the Germans; it is sure to come as a result of their retreat, and there are too many even in public life here and in England who would be disposed to give consideration to a peace conference. Unless we carry the torch of war across the Rhine into Germany there will be no peace that can be lasting."

It is true that Germany unpunished, uncrushed, will be an unrepentant Germany.

Repentance consists in sorrow for evil done and in turning from the evil and pledging a better life in all sincerity. It is different from remorse. Germany might have some remorse because of its failure to achieve world domination, but there is no sign anywhere in Germany that there is any repentance among its people. There is no sign, from the Kaiser to the lowest workman, that the German people have yet been convicted in their own conscience of their blood guiltiness and of their boundless sins. Until they have been punished—punished with a severity in keeping with their great crimes—they will not only be unrepentant, but will be hardened in their sins and made determined to concentrate all their efforts in getting ready for a new war.

The world must crush Germanism in this war or eventually be crushed by Germanism. There is no middle ground, and he who advocates peace on any other basis is false to all civilization.

TRAVEL OFTEN, MR. McADOO!

WILLIAM GIBBS McADOO, Director-General of Railroads, traveled on a crowded train eastward from Cincinnati and saw passengers unable to obtain seats, whereupon, on reaching Washington, he ordered that additional equipment be attached to such trains or else that second sections be run. First-hand knowledge is a grand thing to stimulate reforms.

LET'S LOVE THEM.

CASPAR WHITNEY, in a special dispatch to the New York Tribune, said:

Germans burned 3000-bed hospital at Mount Notre Dame, three kilometers south of Bazoches on Vesle, after killing most of doctors, nurses and 600 patients with machine guns thrust through windows of the one-story wards.

The Only Hope of World Salvation from German Damnation Is an Overwhelming Military Victory of the Allies.

IN an exceedingly interesting article in the New York Times Dr. Frank Bohn tells of his complete disillusionment, as he has now realized that there is no hope of the German military power being overthrown by the German people, since they are in effect one and the same. Dr. Bohn states that he was an incurable optimist, and that until recently he had since the beginning of the war been inclined to hold a high opinion of the democratic forces in Germany, but after studying the matter in Switzerland these views have received a serious setback. "Every democratic exile in Switzerland," said he, "without one single exception, emphasized to me with the greatest clearness that only a decisive defeat of Germany's forces could begin the work of building up a German democracy."

Dr. Bohn then gives the substance of careful discussions of the subject which he had had with four Germans now in Switzerland with whom he had been on terms of the most intimate companionship. For obvious reasons he could not mention their names, but he described them. One is one of the most distinguished leaders in the industrial life of Germany. That would seem to fit either Dr. Muehlon or Mr. Thyssen. He spent many hours discussing the subject with this leader, who said:

Place absolutely no hope in any party, or in any class, within Germany. There is no considerable group in Germany which understands democracy. All criticism of the Government is based entirely on the fact that there is not enough food and clothing. But if the German Government can provide her people with the necessities of life as she has in the past, there is no reason why she should not make war for fifty years. The German people are growing accustomed to war losses. Losing the third or fourth sons causes less suffering than losing the first. Any suggestion that the war is an evil is met by the answer: "Are we not better off than the others? Are we not fighting upon enemy territory? Have we not won every battle?" The number of people in Germany that respects anything but force is utterly negligible. For 20 years I have wished to join a democratic party in Germany and work toward disarmament, anti-imperialism, and republican institutions, but there was no such party for me to join. I would have joined even the smallest group. But there was no group which had the courage to organize. Upon the masses of Germany, capitalists, professionals and wage-workers alike, economic success and the new-found wealth have worked like a black curse. The acquisition of wealth merely destroyed the soul of Germany. Why, can you believe it, the very soldiers who had been most hospitably entertained as individuals by the French women and children of the occupied districts went and burned down the very houses in which they had ate and slept before their retreat last year. When I tell that to my German friends they shrug their shoulders and say, "Such is war." I am hopeless, utterly hopeless, about Germany. Only complete defeat can give her a new beginning.

Dr. Bohn then quotes this industrial leader as having said in reply to a suggestion that Germany would confiscate his property and hang him:

"They may do that. I shall be as happy dead."

And Dr. Bohn adds:

"The man's heart is completely broken. Nothing that I could say during the many, many hours I had with him ever put a smile on his lips or a joyful note in his voice."

The second man whom he interviewed Dr. Bohn calls a profound scholar who has just completed the

writing of a stupendous history of philosophy, a man possessed of wealth and married into a Junker family. This man said:

"There isn't a shred left of the old cultural life of Germany. Poetry is dead and real music is on its last legs. People think of absolutely nothing but getting rich individually and brow-beating other peoples nationally. The whole population of Germany would be willing to go out on a simple marauding expedition for no other reason than bringing back the loot. Don't think that you can talk to them about freedom and have them understand you—yet awhile. You must beat them down physically first."

The next man with whom the subject was discussed is a Socialist who is writing a history of the German mind, and he said:

The entire history of German intellectualism has been, from the very beginning, a ridiculous, perverted, and utterly useless expression of life. The modern German is a Liberal or a Socialist in the same sense as he is Hegelian or Nietzschean or a Christian. That is, he accepts a certain system of philosophical thought because it satisfies him and gives him an answer to the riddle of the universe. But he never dreams of applying any of these philosophical principles to actual life. German thinking is entirely theoretical. For instance, a German Christian "believes" the New Testament. A German Socialist "believes" the materialist gospel according to Marx. The Christian and this Socialist have enormous and bitter arguments at home, the Christian maintaining that all men should be brothers, the Marxian retorting that international brotherhood should include only the workers. But when the call came for the Christian and the Socialist to march side by side to kill off the inoffensive Christians and Socialists of neutral, innocent Belgium, the two disputants marched side by side singing "Deutschland über Alles." Their philosophies of life were equally worthless and ridiculous because they bore no relation to life itself. Of the two, I think less of the Socialist, because his philosophy was created in modern times and claims to deal with the problems of this world.

The fourth man, whom Dr. Bohn was permitted to quote by name, is Dr. Rosemeier, classed by Dr. Bohn as a distinguished journalist of Berlin. He was asked by Dr. Bohn if he could not write something that would really reach what Dr. Rosemeier had called "the saber-rattling wretches of Germany," and the answer was:

"Write something! Write something! Nonsense! Haven't I been writing my fingers off for thirty years. What those fellows need is not ideas for their brains. They need bombs on their skulls."

"But we expect some help from within," I went on.

"Help can come only from one place," he said, "from Bethlehem—Bethlehem, Pa. But you do not realize it fully. They will cheat you yet, those Junkers. Having won half the world by bloody murder, they are going to win the other half with tears in their eyes, crying for mercy."

In these clear statements, given by four prominent Germans—a great industrial leader, a philosopher, a Socialist and a journalist—there is a direct agreement with all that we have for the last four years been writing about Germany as a nation which had sold its soul to the devil for worldly pelf and power. The testimony of all four of these men is that there is no other way of reaching the situation, no other way of stopping the bloody murder by which they

have won one-half the world, except by "bombs on their skulls." And the closing paragraph of the statement from Dr. Rosemeier needs to be studied over and over again, for, writing of his own people, he says:

"Having won half the world by bloody murder, they are going to win the other half with tears in their eyes, crying for mercy."

That is exactly what we face as one of the great dangers of the hour. This race of murderers and looters, this race of which these German men say that the whole population of Germany, from the richest to the poorest, are individually and nationally a browbeating people, "willing to go out on a simple marauding expedition for no other reason than bringing back the loot," have won a large part of Belgium and France on the west, and practically all of middle Europe, and much of Russia in the east. These fearful criminals, out for murder and for loot, out for the profit of pelf, are without conscience and have no fear of God or man so long as they are successful in their campaign. But when the bombs from Bethlehem—Bethlehem, Pennsylvania, mind you—and the bombs from the other bomb-manufacturing plants in America and England and France have battered the way across the Rhine, then these murderers and looters, with tears in their eyes, will cringingly sue for peace and claim that punishment would be contrary to the teachings of Christ! And they have no more concern for the teachings of Christ, except that they can turn and twist these teachings to save their necks from the gallows and to keep the loot which they have secured, than they have for the teachings of their master, the devil!

It will rest upon America and our Allies as to whether we shall permit Germany to win half the world by crime and then win the other half by the cringing cowardice of the weeping voice, helped on in its campaign by the weak-minded, spineless moral weaklings in this country, who hold up their hands in horror when there is a suggestion of a burning, righteous wrath which shall condemn to punishment those who have wrought this awful woe.

Let us never forget the fact that to people whose sins, so far as Divine revelation indicates, were as the whiteness of snow compared to the blood-red guilt of Germany, Christ Himself said: "Ye vipers! Ye generation of serpents! How can ye escape the damnation of hell?"

Christ the Redeemer preached this doctrine, but here and there we constantly hear men in America and in England who profess to be His followers preaching against a spirit which we believe is in harmony with His teachings; a spirit which would punish to the extreme penalty of individual murderers and outragers every German leader who has been responsible for bringing these frightful sorrows and sufferings upon the world.

On to Berlin! And death to the Hapsburgs and Hohenzollerns!

DO LIKEWISE.

MR. BERNARD C. STEINER, librarian of the Enoch Pratt Free Library of Baltimore, in acknowledging the receipt of a copy of the War Eagle series of editorials, writes:

"They constitute an important public service, and we shall be glad to post them on our bulletin board."

Possibly our readers elsewhere might find it profitable to follow the example of the Enoch Pratt Free Library and post these condemnations of Germany where they can be easily read.

"OUR PEOPLE ARE SLOWLY WAKENING, BUT OH, IT IS SO SLOW IN THE INLAND DISTRICTS."

MR. A. M. CHREITZBERG, president of the First National Bank of Spartanburg, S. C., in closing a letter to the MANUFACTURERS RECORD, uses the statement with which we have headed this editorial. Mr. Chreitzberg wants the facts which have been presented from time to time in the MANUFACTURERS RECORD indelibly burned into the mind and soul of every American. We wish this might be done. It is not only true that the awakening has not yet fully come in the inland districts, but it has not yet come to any part of the country with that fullness which we must have ere as a nation we are completely welded into one great fighting machine that knows nothing else on earth for the time being except to fight.

The whole energy of the nation, in the pulpit and in the pew, in the editor's chair and in the work of the newsboy on the street, in the coal operator and the coal miner, the manufacturer, the banker, the clerk in the store and the steel worker, the farm owner and the farm laborer, must be concentrated upon the one supreme issue of all human experience.

We can readily imagine that when the Son of God gave His life for man there were even some who looked upon the suffering on the cross and who turned away with indifference and cared not to hear what that suffering meant.

We can easily imagine that the disciples of those days, as with burning words they tried to tell something of the meaning of the death of the Son of God, found many who were indifferent and who did not want to hear about the blood that was shed upon the cross.

We sometimes wonder in this day and generation how the people of that day could have been so indifferent to the stupendous sacrifice made by the Son of God for the salvation of the world, but we verily believe that the soldiers who scoffed before the cross, the soldiers who drew lots for the garments of the Crucified One, were, because of their ignorance of what they were doing, saintly in comparison with the idle and indifferent and thoughtless men and women of this country who are unaffected as they stand before the cross on which millions of men are being crucified for the salvation of civilization and Christianity. Go to any of the fashionable hotels of the country and you will find a riot of wild extravagance in dress. You will find women vying with each other as to how many dozen of hats they can wear. One Baltimore woman boasted that she took sixteen hats to Atlantic City recently, and another Baltimore woman on a ten-day visit there wore a different hat at every meal, so far as a mere man could judge, though some good women said the number was not quite as great. Apparently such people care not that the gaunt hands of millions of dying, starving people are stretched out for help—care not that millions and tens of millions of soldiers are suffering on the battlefield and that their success depends wholly upon the ability of the Government to finance the war and of the Red Cross and the Y. M. C. A. and other kindred organizations to help care for their souls and their bodies, and yet these women of fashion and frivolity are wasting their time and spending their money in a riot of hats and gowns. Some of them are as apparently indifferent to the tragedy of the hour, as indifferent to the sufferings of millions and tens of millions, indifferent to the call for help, indifferent to the call of God himself in this hour, as were the ribald soldiers who around the cross upon which Christ, the Son of God, died were casting lots for His garments and railing at His sufferings.

The point is illustrated in a statement which came to the writer a few days ago from a thoroughly patriotic young woman who went to Washington as a stenographer because she felt that patriotism called her there. She said that in talking over the situation she was utterly amazed at the lack of patriotic talk among the clerks and stenographers whom she met in that vast throng which is crowded in the nation's capital. She rarely heard anything about patriotism, but all the conversation was on what salaries they were getting, what they expected and how soon they would get a raise in salary.

We trust her experience is not general, but in her

deep patriotism and her deep religious convictions as to what patriotism means she has been somewhat dumbfounded at what she thinks is a lack of realization of the meaning of the war to the clerks and the stenographers gathered by the thousands in Washington. And so we come back to the statement, "Our people are slowly awakening, but oh, it is so slow in the inland," and would add that it is all too slow everywhere.

Well may Mr. Chreitzberg bemoan the slow awakening of America, for until we have awakened to a far greater extent than as yet we shall have no conception of this war and its terrific cost in men and money.

MR. PAUL WARBURG AND THE FEDERAL RESERVE BOARD.

IT was admitted that Mr. Warburg personally was loyal, that he was able and efficient, that he had become a naturalized American a score of years ago.—New York Evening Post.

If the Evening Post will knock off about 13 pages of naturalization, we think it will come nearer the fact. On January 18, 1917, the MANUFACTURERS RECORD republished from The Outlook of New York the following statement, which as far as we know has never been denied:

"PAUL M. WARBURG AS AN AID TO GERMAN DIPLOMACY"—"SOME REMARKABLE STATEMENTS BY THE OUTLOOK.

"* * * A correspondent of The Outlook, a well-known lawyer of New York city, who is thoroughly familiar with the attitude not only of French public men, but of French public feeling, informs us that there is unexpressed but very deep resentment in France against the action of the Federal Reserve Board taken during the last week in November against the short-term Treasury notes offered for sale by the French Government and the British Government in the United States. The Federal Reserve Board officially advised the banks of the country not to invest in these Treasury notes, and thus gave an implied warning to American investors to be on their guard against the securities of the Allies.

"The French as well as English critics who take this ground point out the fact that one of the most influential members of the Federal Reserve Board is Paul M. Warburg, who became a member of the board on July 31, 1914. At that time he had been a partner in the firm of Messrs. Kuhn, Loeb & Co. for some 22 years, prior to which he was a partner in the firm of Messrs. M. M. Warburg & Co., the most prominent bankers of Hamburg. When he retired from Messrs. Kuhn, Loeb & Co., on joining the Federal Reserve Board, he also officially retired from the house of Warburg in Hamburg. But the head of the latter house is Max M. Warburg, a director of the Deutsche Bank, who is the elder brother of Paul M. Warburg. The German firm of Messrs. Warburg has been prominent in the negotiation of all the German war loans.

"Paul M. Warburg became a citizen of the United States in 1911. In 1912 the German Kaiser decorated him with the Order of the Prussian Red Eagle for services rendered by him to the country of his origin in the field of finance. This is the ground of much French criticism of the disapproval, expressed by President Wilson and his administration, of loans to the Allies on the part of American bankers.

"British critics say that not long before the outbreak of the war Count Bernstorff, the German Ambassador, in conversation with a high British official, referred to Paul M. Warburg as a highly esteemed financial adviser of the German Government. That Mr. Warburg is known to his friends as a strong patriotizer and partisan of Germany they do not object to. But they do object to the efforts which they claim he made in October, 1914, to block American credit to the Allies. Our informant states that the Allied Governments regard Mr. Warburg as the most powerful auxiliary of German diplomacy here.

"The foregoing criticisms come from sources too responsible to permit their being waved aside as mere journalistic rumors. They contribute not a little to a proper understanding of the surprise, not to say resentment, with which the President's note has been received in France and England."

Even if Mr. Warburg is as patriotic as he says, and we hope he is, it would be well-nigh impossible for him to be thoroughly, wholeheartedly American when the time comes, as come it must, to make his banker brothers in Germany and all other Germans pay the full penalty of their crimes in upholding their nation in its mad career of lust and murder. If Mr. Paul Warburg was in 1912 decorated by the Kaiser, as stated, has he since the war denounced the Kaiser and returned the decoration? We hope he has; but, however great is his patriotism, it is best that he is not on the Federal Reserve Board any longer.

BUY UNTIL IT HELPS, NOT UNTIL IT HURTS

"Buy until it hurts," "Give until it hurts," are two expressions that are often used, the one referring to the purchase of Liberty Bonds and the other to contributions to the Red Cross or the Y. M. C. A. or kindred work.

Both are fundamentally false in meaning. They should be sent to the scrap heap of rubbish and supplanted by "Buy until it helps" and "Give until it helps."

Do not for one moment vaingloriously think that this means until it helps the country or the Red Cross or the Y. M. C. A. organizations. It means buy or give until it helps *you* and gives *you* a clearer understanding of your responsibility.

"Buy until it helps" you by broadening your vision of the war and the struggle to save civilization.

Buy Liberty Bonds not out of the surplus which you can spare without feeling.

Buy not merely because the purchase of Liberty Bonds is strengthening the nation's power to fight.

But buy because your soul needs the quickening influence of a wider conception of liberty and humanity and civilization. And the more freely you buy the greater will be the ennobling of your own soul. You will be helping yourself, and in that way you will at the same time be helping the nation and civilization.

It is no act of charity to buy Liberty Bonds. It is merely contributing a moiety out of your ability, great or small as it may be, for the purchase of the engines to stop the conflagration which, having swept over much of the world, is sweeping directly toward your house, and you must save your house by your own work, or else recreantly throw upon your neighbors the responsibility of saving you, while you stand off and shirk your duty.

Buying Liberty Bonds is to save *your* wife, *your* mother, *your* daughter, from the last degradation which women can suffer, as in Belgium and France, and to save your property and your nation from destruction.

Then buy Liberty Bonds until it *helps you* to know the meaning of the war, and until down in your soul there comes the real awakening of how millions and millions of men have died, and other millions must make the supreme sacrifice upon the cross which stretches over a thousand battlefields, as they offer their lives for *your* salvation and the salvation of *your* wife and *your* children, and the salvation of *your* liberty, of *your* country, and of civilization itself from damnation under German rule and ruin.

Never for one moment let the thought find lodgment in your brain or soul that you have done your share in the purchase of Liberty Bonds, and in giving to the Red Cross or the Y. M. C. A. or the K. of C., until you feel that you are ready in the sight of God and of man to stand beside the men who are dying on the battlefield and be able to say to them:

"As you are making the sacrifice of your life for me and for civilization, so I am standing by your side to the last ounce of my finan-

cial power, and in the great day of reckoning, when all men shall stand before the Judgment Seat of Eternity, I am willing to have my effort in this mighty cause placed by the side of the record of the men who are dying that others may live, and in doing so are following the example of the Son of God Himself."

Until you have made your purchase of Liberty Bonds and your contributions to the great work of the charitable organizations, whether they be the Red Cross, or the Y. M. C. A., or the Y. W. C. A., or the K. of C., or whatever may best express your individual effort to help the soldiers, on this basis, then think not for one moment that you can stand with a clear conscience before the men who are giving their lives, and who in the great Day of Judgment, when the hearts and the lives of all shall be made plain, shall be able to compare what they have done with what you have done.

Buy Liberty Bonds, therefore, until your buying *helps you*, until your buying *gives you* a clear conscience, until your buying ennobles *your* soul and broadens *your* conception, even by your financial investment in Liberty Bonds, of the tremendous struggle of all the ages.

In buying Liberty Bonds you buy the safest investment on earth. You give nothing. The country gives you in return for your money a security safer than would be a first mortgage on every railroad in the United States; safer than the cash in your bank or in your safe-deposit vaults; safer than the home in which you live; because the railroads and the cash in the bank and in safety vaults, the home in which you live, the farm which you claim, the iron ore and the coal to which you hold title, are all practically under a first mortgage to the Government for the redemption of these Liberty Bonds. More than that, every ounce of physical and mental power, every ounce of initiative and of brain force in the nation is under mortgage for the repayment of these bonds. The Government has the right to take your farm, your home, your railroad bonds, to take your earnings, to take the potentiality of all of your material and financial power expressed in material things, for the purpose of redeeming these bonds.

But the Government gives you in these Liberty Bonds its promise to pay a good rate of interest, to redeem them at a specified time, and in doing this it offers you the safest investment which today can be found in all the wide world. If it did not pay you a single dollar of interest, if its promise to redeem the bonds was indefinite as to time, the Government would still have a moral and a physical right to claim your utmost contribution to the extent of all your wealth and your earning power for the prosecution of the war.

Buy Liberty Bonds, therefore, and buy them until it helps you individually to understand the whole war issue, because "where your treasure is, there will your heart be," and when you have bought them in this way, then you have bought Liberty Bonds to the extent that your purchase *will help* the Government, *will help* every soldier on the battlefield, *will help* all civilization, and to the extent that you fail to do your share in this work you are recreant to your duty to your country, to humanity, and to God Himself.

Buy Liberty Bonds!

"I CANNOT PAY THE PRICE" VERSUS "I AM WILLING TO PAY THE PRICE."

TWO letters lying upon the writer's desk suggest a thought which, finding expression in just a few simple words, cover a range as wide as the heavens. In every avenue of business and in every line of work we constantly hear the expression, "I won't pay that price," which in one form or another merely means, "I cannot pay the price."

The two letters mentioned which call forth varying emotions come from widely separated cities and deal with wholly different things.

One reader of the MANUFACTURERS RECORD comments what he calls the great work which it is doing in behalf of the war, but asks that his name be taken from the subscription list because, says he, "I cannot pay the price."

The other letter tells of a memorial service held in Pittsburgh two weeks ago in commemoration of Lieut. Joseph J. Mason of that city, and in this service a letter from Lieutenant Mason to his mother was quoted. After telling her how gladly he entered the service to do his share in the work which must be done if civilization is to go on, he added:

"If I cared only for the material side of life I might continue in business and be happy; but I would a thousand times rather be dead than to feel that some other man had done what I should have done. I am only doing what thousands of others have done. It took no will power. There was no alternative. I am ready to pay any price gladly."

And this young man of brilliant parts, with the possibility of a long and prosperous life ahead of him, has now paid the price, and paid it, as he said in advance he would gladly do, in order that he might do his part toward saving civilization.

We talk about paying the price of this, that and the other; we talk about being unable to pay the price for the material things of life, and we think sometimes in terms of price expressed in dollars and cents rather than in terms of achievement and service and helping.

We are willing to deny ourselves things which might largely assist in shaping our own destiny and our own ability to serve mankind and all civilization, because we permit ourselves to get into the habit of thinking in terms of dollars in these war times rather than in thinking in terms of service and sacrifice.

Lieut. Mason and thousands of others have thought in terms of sacrifice, thought in terms of duty, thought in terms of giving themselves to save others and to save civilization; and of our own loved ones thousands have already paid the supreme price and many thousands more will have to pay the price. But yet how many of us are still thinking in terms of money, or of material things, rather than in the terms of sacrifice that we may serve, and counting the cents or the dollars often not really because of inability to spend the cents or the dollars, but because we are thinking more of the money side to ourselves than of how we may use the money we have, whether it be little or great, toward broadening our conception of our responsibility, that we too may be ready to pay the price whether that price be expressed in terms of life itself, or whether it be in standing behind the men who must give up their lives for our sake?

One point in the letter from Lieut. Mason to his father needs to be emphasized over and over again. On this point his father said:

"My son's only complaint was the talk that he and others in the war service heard of a compromised peace. He was unbounded in his praise of the 'spirit of France,' which he declared he found a real, definite thing. He wrote that he felt that America was only at the threshold of the war; that it was no time for America to boast; and that 'we over here take off our hats to France.'"

Let the word of this soldier of civilization, and of all other soldiers who give voice to this sentiment, sink deep into our hearts that there shall be no compromised peace, but that we shall fight on until over a conquered nation the flags of America and of our Allies in triumph float.

We must pay the price for victory and Germany must pay the price for its crimes.

SUGAR PRODUCTION SHOULD BE DEVELOPED IN FLORIDA AS A NATIONAL NECESSITY.

INCREASED food production and food conservation have been pressed upon the readers of the MANUFACTURERS RECORD for several years. We have gone far beyond Mr. Hoover in insisting on increased food production and the danger of a great food shortage. He accepted the optimistic statements of the United States Department of Agriculture. We did not.

We knew that the supply of food was decreasing in proportion to the demands upon us and that the danger was steadily increasing that we might not be able to supply our Allies with sufficient food with which to win the war. This was pressed upon President Wilson's personal attention last year, and some facts were given to him showing that in proportion to population the real food supply of the country in grain and meats had enormously decreased as compared with former years.

In a letter written some months ago to the Federal Trade Commission, President Wilson emphasized some of the facts as to decreased food supply. He pointed out that while the population of the nation has increased by 26,000,000 since 1900 the production of corn and wheat has shown only a slight advance, and that the meat production in the same period has shown a decrease of twenty-nine pounds per capita, and this, too, in the face of a world famine and of the need of supplying our Allies with an enormous amount of wheat and meats and other foodstuffs which alone will enable them to win the war. Moreover, as we are sending an ever-increasing army abroad, we must bear in mind that these men are largely drawn from industry and from food production and that the consumption of foodstuffs by soldiers is very much greater than their consumption as civilians. We must, therefore, increase our output of foodstuffs. Drastic regulation is a necessity, but without a vast increase in production drastic conservation of food will not save us.

We must look to China for the increased supply of farm laborers.

How acute the food situation suddenly becomes every now and then is illustrated in a statement which has recently been issued by the Food Administration urging a great decrease in the consumption of sugar. This statement was:

The sugar campaign comes on us suddenly. Revised accounts of losses and resources and new statements of needs which we are in honor bound to meet compel a sharp change in program. We must act quickly. What is not well begun in the next six months will not be done at all.

Our success in the wheat campaign literally held the Allies together through the spring and summer. It did more than any other thing to give them comfort and courage until the tide turned last month.

Therefore the Food Administration appeals to the nation to conserve its sugar, just as last year it begged the nation to conserve its wheat. Both must be done—voluntarily if Americans are sufficiently patriotic, by compulsion if they lack self-restraint and patriotism.

But all of this only serves to show the great need of increased food production.

The world is suffering from lack of sufficient sugar, and yet there are vast possibilities for sugar production in Florida and sugar production in Louisiana can also be greatly increased. Florida is a virgin field which could add enormously to the sugar supply of the nation, and it should be remembered that the sugar supply will be needed not for one year or for two years, but for many years, because it will be a long time before the beet-raising industry of Europe can be restored to a point where sugar production can regain its former position, and the Allied countries should never permit Germany to flood them with its beet sugar. They should protect themselves in the future by creating a sugar industry of their own. Certainly it is incumbent upon us to do this, and the Government could well afford, in the interest of civilization, to co-operate in some broad campaign for utilizing the vast sugar potentialities of Florida for the creation of a new source of supply which would help to meet the ever-increasing demand.

We cannot always go on lessening our consump-

tion of sugar and our consumption of wheat without eventually injuring the health of the people. We can and must stand the strain at present, but broad patriotism and work for civilization demand that we meet this question now by encouraging sugar production wherever in this country sugar cane can be profitably grown.

SHALL WE MAKE GERMANY PAY FOR ITS CRIMES THROUGH A BOYCOTT OF GERMAN INTERESTS AFTER THE WAR?

IN discussing the question of what trade relations this country and the Allies should have with Germany after the war, Mr. Bernard J. Shoninger, in a letter to the Evening Post of New York, mentioning his experience in foreign trade as a resident for many years in Paris, and for thirty years president of the American Chamber of Commerce in that city, quotes a letter which has just been received by him from a soldier over on the battlefield, who gives his view, and the soldier-view is the view which is going to prevail, or the soldiers will know the reason why.

Mr. Shoninger says that this soldier is a graduate of one of the largest American universities; that in 1916, while taking a post-graduate course, he volunteered for the American ambulance work. He served for nearly eight months in the Balkans as ambulance driver, did heroic work there, and then was transferred to the American service when we entered the war. This letter, says Mr. Shoninger, represents the spirit of every American boy who is fighting on the French soil. The letter to which he refers is as follows:

Personally, I cannot speak of "my business" for there is none such, except my post-student affairs, but nevertheless I cannot get away from the fact that in ten years or so, we young men are going to have control of business in America, to a certain extent. By "we" I mean the young American who is offering his life over here in France to keep civilization alive and the hand of the Huns away from our loved ones. I mean those young Americans who are being trained by the German military machine, to hate everything German!! The business men of America today who are not over here fighting, or who are not coming face to face with Hun barbarism, may forget and forgive these unnamable atrocities of the Germans, but I am positive that the American business man of eight and ten years hence, those who are fighting now, will never forget, and I pity German commerce, German business, and German commercialism in general, when the men now in the trenches control American affairs.

I cannot see where it is un-American, un-principled or un-Christian to look forward to a complete boycott of Germany and German goods after this war. We think of our future, oftentimes, in terms of precedent, but we have no such precedent for such a world war as we're having; we have no precedent for such atrocities as Germany and Turkey are committing daily, except the ancient, ignorant barbarians. But we do know, not only through precedent, but by our common-sense, that you cannot treat a barbarian as you would a civilized person, and if so, how in this wide world can Germany, in the role in which facts place her, even aspire to associate with the civilized nations in business, commerce and pleasure!

It does get me heated up to boiling point sometimes and I suppose I have just spouted over, but it ought to "roll" up everybody.

We commend this phase of the situation to the study of the people of this country. The soldiers on the battlefield, who have been called to give up business and home and life itself, are the ones who have a right to say what shall be the treatment of the murderers against whom they are fighting, and if this right is denied them through any unwise peace by compromise, we may rest assured that when the soldiers get home they will have a say in the legislation of this country which will send to the scrap heap, regardless of party, the men who have led in any campaign of a peace by compromise.

There is nothing on earth too good for the American soldiers when they return from the battle front. They will have a right to claim the best in politics, the best jobs in business, the best of all that life can afford in the power to achieve great things for themselves and for the world; and we believe that when the soldiers come back they will be given a welcome such as no soldier on earth have ever received, and their voice will be the voice of the nation.

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PROFITEERS AND PROFITEERS—THE COUNTRY INJURED BY OVERZEALOUS OFFICIALS.

PHILADELPHIA business men, bankers, merchants and others are vigorously protesting against the Treasury Department's charges of profiteering, and we doubt not that from every section of the country will be heard a denial of these charges, which we believe to be wholly erroneous so far as the general business interests of the country are concerned. Bearing on this point, the editor of the MANUFACTURERS RECORD, under date of August 17, wrote Secretary McAdoo as follows:

I enclose a portion of a heading of a Washington dispatch in today's Evening Public Ledger of Philadelphia, whereby that I may ask if a statement of this kind does not convey to the general public an entirely erroneous impression, creating the idea that practically all the business interests of the country are engaged in profiteering to an extent which, if true, would justify unrest and develop bitter hostility. A report such as this is well calculated to give the Socialists and the anarchists and the Bolsheviks abundant ammunition for stirring up hatred and endangering the safety of the country. The Treasury Department's report, as I understand it, shows a very large increase in many cases in the percentage of profit over the profit of the preceding year, but the way in which the statement is sent broadcast and is given in this dispatch in the Public Ledger would indicate, for instance, that the profits in bituminous coal operations range from 1626 to 5983 per cent. If this were true, it would justify the bitterest condemnation. But these percentages when analyzed are not the percentages on the capital invested, but on the reported estimates of increase in profits last year over 1916. And I take it for granted even then they do not at all represent the general business of coal operations.

Flour and grain dealers, as you will note, are reported as having profits from 519 to 7134 per cent., and other industries make a showing equally as bad, if regarded from the viewpoint of the welfare of the country.

It is quite conceivable that a business concern might have little or no profit in one year and a very large profit in the next year. The larger profit might, for instance, have been only a fair amount on the capital, but the difference between the small profit of one year and the larger profit of another year would show an enormous figure when put in the shape of percentage of profit in one year over the other. I have known industries which made a very small profit in one year, sometimes they made no profit in the following year, and the next year they might have made a fair profit on the capital invested, but measured by percentages of the increase of one year over another the figures would look startling to the uninformed who do not understand the actual facts. I have seen a business, for instance, which paid, or rather earned, \$3000 profit in one year, and \$12,000 to \$15,000 in another year, and the latter figure was still a very low rate on the capital invested and the business done, but it was an increase of 300 to 400 per cent. in one year as measured by the smaller earnings of the preceding year. It did not, however, mean that the company earned 300 to 400 per cent., for its earnings might have been much less than 8 or 10 per cent., even in the year of its largest profit.

Some of the smaller companies connected with the handling of food and in many other lines of business depend not so much upon actual capital invested as upon the ability and work of the men who control these enterprises. A company with a small capitalization might, therefore, show very large earnings when, as a matter of fact, the earnings were really the earnings of the brain work of those connected with the management. A grocery store, for instance, may on small capital show what would look like a very large earning, and if measured only by the money invested this might be true, whereas the real earnings would be the energy and the enterprise of the grocer, for often the grocer's earnings are not based on his capital, but on the ability with which he can handle his trade, and that is the stimulation of his energy and brains.

In a time of such tremendous business activity as that through which we are now passing there must inevitably be a larger volume of trade and generally a larger profit than in ordinary times. It should, moreover, be borne in mind that after the panic of 1907, until a year or two after the opening of the European war, almost the entire business interests of the country were suffering from depression and lack of profit. A vast amount of capital engaged in business yielded little or no profit, and farmers made comparatively little money as judged by the vast amount of stuff they produced and its relation to world warfare.

Knowing that every effort made in this country to create an impression that all business interests are engaged in profiteering operations and are robbing the nation and are robbing the people is being used by every Socialistic and Bolshevistic agitator in the country, and knowing that yellow journalism is using these statements to create increased distrust and that even honest-minded papers are often misled, I am taking the privilege of calling your attention to the matter and asking

if it does not seem wise that as Secretary of the Treasury you should assure the nation that the business interests of the country are sound and honest; that the manufacturers and the merchants of the land are as a body just as patriotic as are the farmers and the mechanics, and as every other class of people. As it stands today, the country is being made to believe that the Treasury Department is proving that the whole nation, so far as its business interests are concerned, is largely made up of profiteers and robbers, and this, I am sure, is contrary to the facts and contrary to your own views.

Am I, therefore, not justified in asking you to set at rest the Socialistic agitation based on these sensational statements by giving to the public assurance as to the honesty and integrity of the business interests of the country as a whole?

The inference conveyed by these press dispatches is wholly unjust to the country's business men as a class. These charges carry the impression that most of our people are highway robbers, even when they are acting under the direct control and price-fixing by the National Government itself. The effect is to intensify Socialistic, Bolshevistic agitation, based on charges made by the Government itself, but which are not founded on any fair interpretation of the whole situation.

The profiteer who sacrifices his country for profit, whether he be merchant, manufacturer, mechanic or farmer, is false to all civilization; but large profits, large wages and high-priced farm products are not of themselves proof of any injustice to the country or of any wrongdoing. The price fixed by the Government itself may, for instance, be only sufficient to enable some concern to live, while at the same price other concerns may be able to make very heavy profits. The wages paid to mechanics may be fully justified if the mechanic gives fair, honest service in return. The farmer is not profiteering if he is able fairly and honestly to secure higher prices than ever before. We are in a world war, with high prices, due to many causes, and all things must be judged on that basis without prejudice or unfounded allegations of evil.

And yet the real profiteer—the profiteer who sells his country for profit—should be hunted out individually and punished as a criminal, whether he be a slacker, mechanic, a manufacturer or a food dealer, without all business men being denounced.

COWPER FORESAW THE KAISER.

The Enoch Pratt Free Library of Baltimore City.

August 16.

Editor Manufacturers Record:

While reading the other day, I ran across the enclosed verses, by Cowper, the latter part of which seemed so remarkable a prophecy, as to the Kaiser, Wilhelm the Second, that I had them copied, and send them to you, thinking that you may feel like printing them in some number of the MANUFACTURERS RECORD.

BERNARD C. STEINER.

(From William Cowper's Table Talk, lines 13 to 46, written in December, 1780.)

Let laurels drenched in pure Parnassian dews
Reward his memory, dear to every Muse,
Who, with a courage of unshaken root,
In Honour's field advancing his firm foot,
Plants it upon the line that Justice draws,
And will prevail or perish in her cause.
'Tis to the virtues of such men man owes
His portion in the good that Heaven bestows:
And when recording History displays
Feats of renown, though wrought in ancient days,
Tells of a few stout hearts that fought and died
Where Duty placed them, at their country's side;
The man that is not moved with what he reads,
That takes not fire at their heroic deeds,
Unworthy of the blessings of the brave,
Is base in kind, and born to be a slave.
But let eternal Infamy pursue
The wretch, to naught but his ambition true,
Who, for the sake of filling with one blast
The post-horns of all Europe, lays her waste.
Think yourself stationed on a towering rock,
To see a people scattered like a flock,
Some royal mastiff panting at their heels,
With all the savage thirst a tiger feels;
Then view him, self-proclaimed in a gazette,
Chief monster that has plagued the nations yet!
The globe and sceptre in such hands misplaced,
Those ensigns of dominion, how disgraced!
The glass that bids man mark the fleeting hour,
And Death's own scythe, would better speak his power;
Then grace the bony phantom in their stead
With the king's shoulder-knot and gay cockade;
Clothe the twin brethren in each other's dress,
The same their occupation and success.

HOW BUSINESS MEN CAN STRENGTHEN THE WORK OF THE NEWSPAPER IN WINNING THE WAR.

MR. CLARENCE J. PALMER, secretary of the Protective Life Insurance Co. of Birmingham, in heartily commending the editorial work of the MANUFACTURERS RECORD on the war, asks if we could not "consistently request every loyal paper in the United States to republish some of these editorials as the only answer to peace talk."

We appreciate the compliment of Mr. Palmer's suggestion, but it is not for us to make such a request of the newspapers. We are more than glad, of course, to have any of these editorials freely reprinted by any paper in the country, but the MANUFACTURERS RECORD does not feel that it would be justified in making such a request of them.

Every paper must for itself judge as to what best suits its readers, and, while we gladly offer reprints of these editorials to any papers that desire them, we would not, of course, presume to request them to use them.

If, however, our subscribers feel that these editorials could be made of service by wide republication—and many of them are constantly making this suggestion to us—it would be entirely within their province, we think, for them to take up the matter with the editors of their local papers and urge upon them to give more attention to this war campaign than they are now doing, if they feel that any of their papers are short in that respect.

The great majority of American papers are wholeheartedly working for the war. Not many of them are slackers in that respect. But we do believe that in every community the business men should recognize the great burden which is resting upon the newspapers and by co-operation, whether this be in suggestions for the discussion of war work or whether it be through active co-operation in increasing the ability of the newspapers to do this work through increased advertising and increased circulation, lessen the burdens on their local publishers.

The war is throwing a tremendous burden upon the newspapers of the country. Many of them are laboring under financial difficulties which lessen the mental and physical power of their publishers to do as much as they would like to do in behalf of the war. The newspapers are the spokesmen of the nation. They must voice its thought in behalf of war and against a premature peace. They must give the news from the battlefield and the long list of casualties which will steadily increase from day to day. They must spend far more for telegraph tolls than they have ever done in the past. Their paper bill is doubled, and in some cases more than doubled. All other expenses connected with their work have increased. And yet day after day these papers must go on as the very pulse of the nation, strained sometimes almost to the point of breaking because of the burdens which they face in lessened supply of men and increased expenses.

We know the difficulties of carrying on work under the lessened supply of labor, for with a large proportion of our young men out of our business office now in the Army and the Navy, with a shortage of printers which makes printing a difficulty such as to bring gray hairs to the managers of all printing work, we can fully appreciate the struggles of other papers to find labor for editorial and reportorial work, and even for work in the circulation and business departments. And yet the work must go on more vigorously and more aggressively than ever before because of the tremendous call upon the newspapers to do their share. This means a greatly increased strain upon the endurance of every man in newspaper and printing work.

In many parts of the country newspapers are seriously suffering from these conditions, and the local business men in every community could largely strengthen the work of the papers for the war and at the same time benefit the community and their own individual interests by a spirit of hearty co-operation with their local newspapers, recognizing that the newspapers are an absolute war essential.

IS GERMANY'S FINGER IN THE PLATINUM PIE?

WHILE the country is discussing the platinum situation, the Chemical and Metallurgical Engineering, one of the leading technical papers of the country, makes the following remarkable statements:

First let us dig up a little history. Thirty years ago the world's headquarters for platinum were with Johnson, Matthey & Co., Ltd., of London. Then, following the path of trade in many other branches of industry, the Germans took a hand and there arose one Heraeus, who became a man of might. The American manufacturing business was promising, but undeveloped, although it started here. There was the Bishop concern in Pennsylvania and Baker & Co. of Newark, both small, the latter also refining gold and silver from jewelers' sweepings, photographers' residues, etc. In the meantime an understanding appears to have been reached between Heraeus in Germany and Johnson, Matthey & Co. in England.

Next we observe the organization of the American Platinum Co. of Newark, and find Mr. Charles Engelhardt in control, seconded in time by his able assistant, Dr. Zimmermann, a reserve officer of the German army. Mr. Engelhardt also came from Germany, but whether he was sent here as an agent of Heraeus or came independently we do not know. Soon the Baker establishment began to expand, far beyond the means and credit presumably available to the firm as it was, and they proceeded to make platinum stills for sulphuric acid and other apparatus on a large scale. We do not affirm that these extensions were paid for by German capital, we merely state our understanding that a large percentage of the stock was soon owned by Heraeus and Engelhardt on the one hand and an equal share by Johnson, Matthey & Co. on the other. Heraeus also is said to have owned a one-fifth interest in Johnson, Matthey & Co.

Shortly after the enlargement of the Baker concern and the accession of new interests, the price of platinum advanced out of all proportion; far higher than trade conditions warranted. The situation displayed all the stigmata of the presence of a regular, old-fashioned, millions-in-it trust. The senior Baker died and so did one of his sons, leaving Cyrus O. and Charles in the business. Now Cyrus also is dead, and while Charles still participates in it, the platinum headquarters in America are to be found under Mr. Charles Engelhardt's hat, and not elsewhere. In the meantime, Baker & Co., Inc., are reported to have gone into the manufacture of platinum jewelry mountings on a large scale.

The complexities of German ownership grew apace. There was the Crosehlre concern, which was originally a gold and silver refinery similar to the original Baker house, and a competitor. This was taken over by Roessler & Hasslacher, who proceeded to offer platinum and platinum compounds for sale. Roessler & Hasslacher are or were connected with and established by the Deutsche Gold & Silber Scheideanstalt at Frankfurt-on-the-Main. What the relations between the Scheideanstalt and Heraeus are we do not know, but the disposition of German houses is to be friendly in foreign trade. Neither can we give the relations between the corporations named and other refiners of the metal in this country except to note that the trade seems to be closely organized.

Whatever the original composition of the international platinum syndicate, it is evident that Johnson, Matthey & Co. dropped out when the war began and they have had to shift for themselves. We are informed that Mr. Engelhardt and his friends have taken over the Heraeus interests in the American organizations. He is, we understand, an American citizen, and he has functioned as the adviser in regard to the metal with which he is abundantly familiar to the Division of Chemistry of the War Industries Board. The chairman of this department is Mr. L. L. Summers. And here we reach a situation that we would like very much to have explained.

Mr. F. W. Draper brought over from Russia for sale 20,000 ounces of platinum which was the property of the Russian and English Bank. He was authorized to sell it for \$105 an ounce. On the arrival of the metal in New York it was commandeered by the War Industries Board. There followed a series of interviews between Messrs. Summers and Draper, in which Mr. Summers offered to pay \$90 an ounce for it and no more and refused to let it be sold elsewhere. Mr. Draper protested and so did the bank, claiming that this would involve the institution in serious financial loss, but \$90 an ounce is all they received. Mr. Draper said that the bank had 15,000 ounces more for sale and that at the time they were able to produce and deliver still more, but it is also said that after the \$90 episode they gave up the idea of sending any more platinum to the United States. Now, if the German interests wanted to prevent the metal from reaching this country so as to make us slow down on the production of the needed oleum for munitions, they could not have asked for a more effective means to accomplish their purpose.

The present situation is that we need more platinum than there is in sight. That is a fact, and we are not interested in the opinions of laymen as to what substitutes are available for various purposes or what the effect of such steps as may be necessary will be upon the 1918 profits of the jewelry trade. What we would like

to know is whether Mr. Summers cut the price for Mr. Draper from \$105 to \$90 on the advice of Mr. Engelhardt or on his own initiative. If it was wholly on his own initiative it was a blunder—but we all make mistakes. On the other hand, if it was at the suggestion or on the advice of Mr. Engelhardt, who is too well posted on platinum affairs to make serious errors in calculation, it will establish in us the fear that he is still a little too close to the Heraeus outfit to be an entirely safe adviser in time of war.

There has been too much talk and too little doing in this matter. It is amazing to consider that serious men will listen to the effort to balance up fashions and styles in jewelry with the country's need in its hour of peril. There is just one way out of this difficulty, and that is for the United States Government to take control and possession of every plant that handles platinum and proceed to order sales according to requirements.

The Committee on Ways and Means spent the better part of three days listening to the views of jewelers, chemists and Government representatives on the platinum situation. While the committee was not enlightened on the question of how to raise revenue from platinum, it did receive considerable information which Congress as a whole might read to its profit. By far the best advice the committee received was that there should be no platinum to tax; that the Government should gather into its vaults all platinum not now serving a useful purpose in war work and hold it against the time when it may be needed.

RUNNING UP BIG SCORE.

AT a recent banquet of the Merchant Seamen's League in London the song that was sung with greatest pride contained the following verse:

Oh, never a Fritz shall sail
In a ship that sails with me.
Never a box or bale
That smells of Germany.
Never the like of they
Shall sail the British shore
Till the seamen of England say
"You've settled the seamen's score."

The score to be settled is the cold-blooded murder of something like 20,000 British seamen on unarmed vessels which the Hun raiders have sunk either with no concern for the lives on board or with deliberate attempts to make their deaths sure. Cabinet ministers and other distinguished guests joined the league in a solemn oath that the Germans must make full reparation for their crimes before they or any of their goods or products will be received at a British port or carried on a British ship.

As America's death list grows long, we shall probably begin to see some things with British eyes.—Rochester Post-Express.

Not with the eyes of some weak-minded British and American pacifists, but with the eyes of these English seamen, who know that their duty to God and to man is to punish the brutes and punish without any heed to the mawkish sentimentalism which says the German people must not be punished. Miss Doty, in her neurotic book, "Short Rations," from which some ministers have unwisely quoted and have commended some things, says that there should be no punishment for criminals, either individually or nationally, for punishment only does harm. We must, she says, love the criminals into goodness.

If Miss Doty saw the women of this country suffer the greatest indignity which can come upon womanhood through the beastly nature of German brutes, we wonder if she would still hold the same opinion.

Notice to Readers.

Our readers will please bear with patience the long delays which sometimes occur in publishing accepted matter or the utilizing of suggestions which come from all parts of the country. While the Manufacturers Record welcomes suggestions on all the problems which this nation is now facing, it is not possible for us to use all of these suggestions nor to publish promptly all of the accepted articles. The limit of space and of time makes it difficult to meet all of these conditions.

Our readers are also asked to remember that the delays which often take place in the delivery of the paper are not due to our office, but to the congestion of business in the postoffices and on the railroads.

THE "WAR EAGLE SERIES."

United Engineering & Foundry Co.,
Farmers' Bank Building,
Pittsburgh, Pa., August 22.

Editor Manufacturers Record:

The writer wishes to thank you for your pertinent cover page editorials, "War Eagle Series."

If editorials as printed in this series do not arouse the people of this nation to the task we have before us and the barbarians we are fighting, they are not capable of being aroused. We have the series displayed in the offices where they may be seen by the greatest number of people.

If one-quarter of the publications in the United States were as thoroughly American as the MANUFACTURERS RECORD, there would be nothing but a straight road to Berlin.

We feel that the MANUFACTURERS RECORD cannot help but reap its reward for the true American spirit it has shown.

Trusting you may have all the support necessary in carrying on this good work, we remain,

Very respectfully,

UNITED ENGINEERING & FOUNDRY CO.,
GEO. L. RAY,
Advertising Manager.

A 16-Page Pamphlet

Germany— The Super-Fiend

A Nation Gone Mad in Its
Lust for Power and World
Dominion.

A discussion of the Fallacious
Doctrine that "Might Makes
Right" and "As the State Can
Do No Wrong, if the State
Orders Crimes Committed, It
Ceases to Be Crime."

With a view to bringing important
articles and editorials bearing on the
subject into handy form for distribu-
tion, the Manufacturers Record has
republished in a single pamphlet the
following:

"The German Nation's Brutality a
Natural Product of German 'Kultur.'"

"The Degradation of Childhood and
Womanhood by Germany."
By Dr. Anna Howard Shaw.

"Confirmation of Thyssen's Damning
Revelations of Germany's War of
Murder for World Conquest."
Including views of Otto H. Kahn, of Kohn,
Loeb & Co., and the revelations of Dr.
Muehlen, former director of Krupp.

"Trying to Repeat in America the
Ruin Wrought in Russia."

"We Must Fight the Blood Lust of
the German Tiger Unto His Death."

"Time to Think Straight as Well as
to Shoot Straight."

"A Slander on The Yellow Dog."

"The Fighting Eagle of America."

This pamphlet is one of the most important we have published. It discloses the German philosophy which led to Germany's barbarism and presents many other facts which should be made known to every American. It is of equal interest to men, women and children. Read it and distribute it to your friends and employees.

Published by
Manufacturers Record, Baltimore, Md.

5 CENTS PER COPY
25 OR MORE AT 4 CENTS PER COPY
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August 22, 1918.]

MUST FIGHT ON THE EASTERN AS WELL AS ON THE WESTERN FRONT.

THE decision of the War Department to create an army of 6,000,000 men, with 4,000,000 of them in Europe by next June, indicates that at last Secretary Baker has awakened to what this war means. If the Secretary himself has not been fully aroused by the magnitude of the task, then those about him have awakened.

Many months ago the MANUFACTURERS RECORD took the ground that there would be no safety for this nation or for civilization until we had created an army of 10,000,000 men, with 5,000,000 of them on the battle front and a steady stream going over to fill up the vacancies caused by the disasters of war.

We still feel that this nation must look forward to an army of 10,000,000 men instead of one of 6,000,000, which we are now proposing to create, as vast as is this 6,000,000 project as compared with all the plans of the War Department of even a few months ago.

Germany is unbeaten, and Germany can fight for many years unless we can hit a blow far greater than now seems possible for a long time to come.

We can have an ending of the war probably within a year or two if we are willing merely to give Germany a breathing spell in which to prepare for another war, but if we are really determined to crush the accursed spirit of Germany, which teaches war as a business; which believes in war as a money-making scheme, for the nation and for individuals; which glories in war as a high and holy thing, and which for generations has sought to enrich the nation by definitely making war upon others as a profit-making scheme; if we really mean business and are determined to blot out Germany's power to keep on in this course as it has through the centuries, then the struggle is a long and a bloody one. We may drive the German army back to the Rhine, but when we have done that we shall face tremendous entrenchments and such gigantic fortifications as to make further advance a long and difficult one.

If Germany can hold the battle line along the Rhine for a year or two and be left untrammelled in the East it will be able to mobilize the resources and the men of the conquered regions of Poland and Russia and of other countries to such an extent as to regain its entire fighting power.

We must remember that Germany has made the study of war and the preparation for war its business. Through the ages its schools, from the lowest grade to the universities, all the wide ramifications of its business, all of its politics, have been made subservient to the one supreme issue of fighting. With Germany nothing else counts. There is no honor in the nation, no sense of shame at the crimes committed, but, on the contrary, a supreme glorification of all criminal acts which have helped it in its warfare in the past as in the present.

The optimistic spirit with which the correspondents of American papers in Europe are telling of the magnificent fight of our men, as they have stood by the soldiers of our Allies in this great struggle, has helped to create a thought among American people that we are nearing the end of the war. When reverses come, and we have dark days in which our flag does not go forward and when the toll of death enormously increases, optimism is likely to give way to pessimism which will be as unjustified as is the optimism of this hour. Common sense should teach us that as no soldiers in the world ever fought with greater heroism than those of France and England and Belgium and Serbia, it would be the height of folly for any vainglorying on our part as to the achievements of our men until we have had to endure the agony which our Allies have suffered.

We must look forward, therefore, not merely to an army of 6,000,000, but in all human probability to one of still greater numbers.

It is altogether probable that while Germany holds the line of fortifications on the Rhine, to which point its troops will eventually be driven, it will be with tremendous activity mobilizing all the resources of the vast eastern territory which it has conquered, unless we join the Allies by sending a great army through the Balkans in order to cut off Germany from its connection with the East.

We do not believe that the victory will be settled on the western front alone, but that Germany must be conquered on the East just as completely as our

nation is counting on her ultimate defeat on the West.

Germany, undefeated and uncrushed on the East, would be an unbeaten Germany, with power left to reorganize and rebuild a fighting machine infinitely greater than that with which for four years it has been seeking to overrun the world.

America must help to conquer Germany on the eastern front as well as on the western, and 6,000,000 soldiers will not be enough for the task. It is well, therefore, that the proposed new draft law shall include all men from 18 to 45, because the 18-year-old boys before they have secured an adequate training, which means at least one or two years, would be old enough to become the most splendid fighting material which we could possibly produce. Every suggestion, therefore, that the limit of the draft should be higher than 18 is a mistake. Every effort of educators to insist that young men should continue in colleges because of the need of educated men after the close of the war shows that these educators have not realized how great is the danger and how tremendous the need of fighting men. Education is good; it is wise that as many young men as possible should be fitted by college life to meet the responsibilities which will come after the war, but when a boy's mother and sister are being attacked by brutes, he must fight then and there to save them from destruction, whether he has a college education or not, and that is our nation's situation.

In pamphlet form available for distribution

The Most Damning Revelation of Germany's Turpitude Ever Published

Turpitude — Century Dictionary Definition: Inherent Baseness or Vileness; Shameful Wickedness; Depravity.

A Confession from a Partner in a Nation's Crime

August Thyssen, a leading steel manufacturer of Germany, discloses the details of a plan for world domination, entered into in 1912, between the Kaiser and the business men of Germany.

You will do your country a great service by reading and distributing this pamphlet with its amazing revelations of Germany's determination to bring on this war in order to conquer and loot the world.

5 cents per copy

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500 or more in bulk at 3 cents per copy

Published by
Manufacturers Record Publishing Co.
Baltimore, Maryland

AMERICAN POTASH FOR AMERICAN FARMERS.

A PRESS bulletin just issued by the United States Geological Survey shows that the production of potash for the first six months of 1918 was between 20,000 and 25,000 tons of K_2O , and it is estimated that the total for the year will reach 60,000 tons. This is nearly double the amount produced in 1917, and it is a very gratifying increase. It is still, however, only 25 per cent. of our normal requirements, and in order to make this country independent of Germany it is very necessary that additional sources should be developed.

The Bureau of Soils has estimated that the cement plants of this country alone should be able to produce more potash than the total estimate for 1918. At the present time there are only about a dozen companies recovering potash or installing plants for that purpose. The blast furnaces could probably produce 200,000 tons of K_2O per year and at the same time obtain a cleaner gas for their stoves and gas engines. Over 60 per cent. of the production for 1917 came from the natural brines, and this source will show a large increase for 1918.

The reason why production is not increasing more rapidly is largely on account of the uncertainty of the whole question. Prospective investors have no guarantee as to how long the present high prices will last, and hesitate to invest capital in a business that may be ruined as soon as the war ends. It seems to us that in this case the companies should be allowed to write off the entire cost of the plant before having to pay any profits tax.

In order to stabilize this industry the Government should make a statement on the question of future imports, and it should be definitely stated that Germany will not be allowed to dump potash on the American market in order to crush domestic producers. In order to give assurance to investors to develop our potash resources this step on the part of the Government is absolutely necessary, and if this be done we can become wholly independent of German potash for evermore. That Germany is relying on her supposed monopoly of potash to force this country to supply her with the raw materials that are essential to her is shown by the following statement reported to have been made by Professor Roth of Greifswald University:

"Along with coal and iron, potash is Germany's strongest weapon, and if the best of them should be taken away from her, she would be deprived of the best economic club she can wield against the United States. So it is necessary that our world monopoly in potash should remain intact. It will enable us to demand in exchange certain necessary raw materials from our present foes."

BOYCOTTING GERMAN TRADE.

MR. W. T. HORNADAY, president of the American Guardian Society, in a letter to the MANUFACTURERS RECORD, writes:

The American Guardian Society is going ahead by leaps and bounds. New members are coming in at the rate of about 300 per day, and we are swamped with work. Having as yet the most meager funds, we are unable to hire any help, and volunteer help is not continuous. I hope that my call for funds will bring in a sufficient amount that we can hire regular help.

I think it is now quite time for you to take up the boycotting of German goods for 25 years and preach it persistently as you so well know how to do. Peace will come by October, 1919, and then the traitors, one and all, will try to force favorable trade terms for Germany upon us. Millions of people in America are so mean-spirited that they will buy goods of Germany if they are one cent cheaper than ours. Now is the time to start the boycott propaganda. It is becoming popular.

For many months Mr. Hornaday has been urging upon the country the importance of definite signed agreements on the part of the American people that they will not for the next twenty-five years buy any goods of any kind made in Germany. He regards the boycott of German goods as one of the means absolutely essential toward the adequate punishment of Germany for its fearful crimes. We doubt his prediction of peace in 1919, unless it be peace with an unbeaten Germany.

THE HUN PROPAGANDA AGAINST AMERICAN BUSINESS INTERESTS TO CREATE DISTRUST.

THAT the Hun propaganda is vigorously at work in the anthracite coal regions, to create dissension there and to send broadcast through the country false statements as to the conditions prevailing in anthracite mining operations, is the definite charge made in the Anthracite News, issued in the interests of the anthracite coal output of the country. No one should be surprised that this charge is made, nor in finding the I. W. W. and other German propaganda at work seeking to disorganize the coal interests of the country and at the same time filling the newspapers with dispatches carrying absolutely false interpretations of the conditions prevailing.

The Hun program is on a par with the work of the devil himself; it never sleeps; it never rests. It stretches out its tentacles in a thousand directions, and they touch the laboring man, the business man, the politician, the newspaper man, and even the minister of the Gospel, by creating false impressions and stirring up an agitation calculated to mislead the country and to sow the seeds of discord everywhere. This is the definite plan of the Hun propaganda, and it was the carrying out of exactly the same kind of program, under exactly the same kind of influences, which has brought about the fearful chaos in Russia—a chaos of murder, of robbery, of looting and of the destruction of business and all business interests such as the world has probably never before seen.

The same program is being vigorously and viciously carried out in America, and yet many of our people blindly refuse to see the truth and fail to recognize the dangers which menace us through the Bolshevik anarchy which is at work in every part of this country. Sometimes its influence is evidently worked through the power of money; sometimes through sowing the seeds of distrust; sometimes by maligning laboring men and their patriotism, but more often by putting forth wholly false statements in regard to the business men of the country and their patriotism and the consecration of their lives to the nation's work.

Last winter, for instance, a group of the ablest business men in America were viciously assailed in dispatches from Washington and in thousands of editorials based thereon in the campaign to block the building of the Hog Island Shipyard. So vicious was this campaign that even Mr. Hurley laid before the President statements which caused Mr. Wilson to investigate the matter with a view to criminal prosecution, if any proof could be found on which to base it. After these business leaders were made to suffer by such unscrupulous pro-German criticism, accepted as truth by thousands of American papers and millions of American people, the Law Department of the Government now frankly admits that there is no evidence whatever on which to base any criminal charges.

For years the nation had to put up with the unceasing denunciation of the railroads by the Interstate Commerce Commission and by Mr. Brandeis, who posed, so successfully to himself, as a crusader against the railroads in the interest of the dear people. Every effort of the railroads to secure increased freight rates in order to provide better transportation facilities was assailed as though railroads and railroad officials were highway robbers. No sooner did the Government take possession of the railroads than it reversed every regulation which it had previously enforced upon railroads. The Government had denounced pooling of freight and for-

bidden it as a great crime. One of the very first acts of the Government was to order the pooling of all freight. The Government had worked unceasingly against an advance in freight rates. Just as soon as the Government took possession of the railroads it began a radical change in policy, and at one swoop made an advance of 25 per cent. in freight rates without stopping, even by the admission of the Railroad Administration, to consider any details or technicalities as to the effect of these rates on any line of business.

The way in which the Government reversed itself on all railroad matters is but indicative of how it has had to reverse its position on nearly every great issue used by politicians for stirring up strife in order that by arousing the mob spirit they might continue in power. Surely it would seem that the American people ought by this time to have learned the lesson and to have come to a realization of the fact that a very large proportion of all the denunciation of business men and of business interests, in the past and at present, has been unfounded and is due to the same spirit which in Russia has found expression through the work of the Bolshevik leaders, who have been ready at all times to sell themselves in order to win the favor of the mob spirit.

That there may be here and there some profiteering, that some men have committed crimes in profiteering which should in a time of war send them to the firing squad, is probably true; but every effort made to create the impression that the great business leaders and great enterprises of the country, are unpatriotic profiteers is a slander upon American civilization. To spread these wild statements and to exaggerate every single case in order to create an impression that the packers, the coal operators, the shipbuilders, the steel makers are robbers is a part of the Hun program today.

COUNT ALL GERMAN WORK AS THE WORK OF LIARS AND LOOTERS.

A DISPATCH from Washington to the Christian Science Monitor says:

Colonel Churchill, Chief of the Military Intelligence Branch of the General Staff, directs the attention of American editors to recently published letters from American prisoners of war in German camps in which the prisoners speak of the excellence of the food and general treatment of the prisoners.

An officer of the military intelligence branch, who spent two years of the war in Germany, reports that there are certain rules laid down for all prisoners in letter writing. The price they pay for the transmission of their letters is that they must state that they are well treated; also that the food is good, and that they are contented. The letters of the prisoners are carefully censored at the camp, and any statement made contrary to the rules laid down for letter writing simply means destruction of the letter. It is, therefore, concluded that any information coming from American prisoners in Germany is absolutely unreliable and should not be published in American newspapers or magazines as in any way authentic.

It is urged that all editors give the above very earnest consideration in handling prisoners' letters that may reach them in any way whatever.

AROUSING THE NATION.

REV. W. J. McGLATHLIN, D.D., professor of church history in the Southern Baptist Theological Seminary of Louisville, Ky., in acknowledging receipt of a portfolio of the War Eagle Series of editorials issued by the MANUFACTURERS RECORD, writes as follows:

The series of reprints of editorials came in due time. They are powerful indictments of Germany and equally powerful calls to America. Moreover, they are very attractively reprinted and ought to do much additional good in this form. I repeat to you what I have often said to others, that is, that you have done more effective work in arousing our people to the gravity of the situation than any other publicist in America, so far as I am acquainted with their work.

UNTIL HEAVEN MAKES PEACE WITH HELL WE SHOULD NOT MAKE PEACE WITH AN UNBEATEN, UNREPENTANT GERMANY.

WALTER H. DRANE, editor of the Banner, Lebanon, Tenn., writing to the MANUFACTURERS RECORD, says:

We are making full use of your splendid editorials on the war, and trust we are not overreaching your rights. We feel that such inspiring articles as have been appearing in your paper for the past year should be made available to as large a part of our population as possible, in order that the proper spirit in regard to Germany may be maintained. I am enclosing you a marked copy of our paper with a letter from a soldier of the regular army who writes from the trenches, and in his article he expresses exactly the same attitude in regard to Germany's peace proposals and the attitude we should take that you have so often expressed, and this has prompted me to send it to you.

Not only is the Banner more than welcome to republish everything, without stint or limit, which appears in the MANUFACTURERS RECORD, but we would be glad to see papers throughout the country make free use of anything which appears in this paper in the interest of our great fight against the world's most accursed power of evil. There are millions of people who do not yet fully grasp what the war means, and many of them are still under the influence of the German propaganda which had been sowing its seed long before the beginning of the war in 1914. We are still reaping the harvest from the seed which Germany has been so industriously sowing in America, as over all the world, in an effort to create the impression that Germans were supermen; that they had a right to dominate the world; that Germany was the land of Kultur, and that we must necessarily follow after Germany's leadership.

Hundreds of ministers in America have been a curse to this country and to the preaching of the Gospel of Christ by having imbibed Germany's atheistic and agnostic teachings. The curse of Germany's Kultur and of its atheistic work was spreading rapidly throughout America, and was to be found in many theological seminaries and in many pulpits, as well as in universities. And now Germany is continuing to sow its seed of evil in seeking to create an impression everywhere that we must deal leniently with the criminal; indeed, that Germany must not be punished and that it must be permitted to dictate the terms of peace or be given a peace by compromise.

As well might one talk of a peace by compromise between Heaven and Hell, and by Heaven granting unto Hell a free right to rule and to ruin all creation, for that is what a peace by compromise would mean for Germany.

We repeat, therefore, that the privilege of republishing anything on this subject is given freely to all of our exchanges, or to any other papers in this country, and we believe that in making this statement we are to some extent at least not moved by the gratification which comes to any newspaperman in seeing his work republished by other papers, but that there is a higher motive in it, and that is the motive of spreading broadcast throughout America the real truth in regard to Germany and this war.

THE WRATH OF SATAN.

Robert Ranson,
St. Augustine, Fla., August 22.

Editor Manufacturers Record:
Your widely copied editorials seem at times to be almost inspired, especially in the days when true faith in God is waning and belief in Satan's power is encouraged.

We are so plainly told in the Revelations of Jesus Christ that as Satan realizes his time is short his work will be exceeding great, and now after he, the god of this world, has so miserably failed during his reign of 6000 years, it has come to the final time of rule or ruin, the arch-fiend has chosen a most efficient ally in the Kaiser, who, like his master, will rule the world or wreck it.

Let me quote the exact words of Otto H. Kahn written me in a personal letter last spring:

"Heaven grant that the German people may soon awake to the appalling guilt of those whom it has allowed into calamity and disgrace and may have the will and strength to rid itself and the world of that dreadful curse!"

Very truly yours,
ROBERT RANSON.

HOW ENGLAND OF THE IZATION.

THE capture of Baku, for many years, region in the war, indicate work which England recalls to the last eight with the English are believe, a of the great India which in communication East, when C Islam world is the hope of h mediums engage civilization a many remark British Army el-Amara, or a circles a For five m that region a mility is so greater than of India. The temperature brass railing becomes so i grasps the r lost iron, and "Kut" the s added sufferi In this str and Turkish the human r Almighty fir the English Enphrates is heavy rains portions of more. The carried on could move the occasion deep and co In the flu Bagdad the three days, that time. the history The capti mous in the thought with Germ many was long point in under the tianity. Bagdad is 50,000 are a population lation from fearful attr their unce the Armen they have and by mu order wer army gave which it h honor and used. In murder of began to condition, in doing a the inhab itence in dad had points of Some y

August 22, 1918.]

HOW ENGLAND'S ARMY IN THE CRADLE OF THE HUMAN RACE SAVED CIVILIZATION.

THE capture by an English expeditionary force of Baku, the great oil center of Russia, which for many years was the greatest single oil-producing region in the world, is one of the romances of this war, indicating the far-reaching and tremendous work which England has had to do.

It recalls to mind an address which is now being delivered in this country by Colonel Milne, who for the last eighteen or twenty years has been identified with the English Army in India, and for some years, we believe, a member of the India Council. In telling of the great struggle of the English Army from India which invaded Mesopotamia to cut the line of communication of Germany and Turkey toward the East, when Germany was trying to dominate the Islam world in order to bring on a "holy war," with the hope of having hundreds of millions of Mohammedans engaged on the side of Germany as against civilization and Christianity, Colonel Milne gives many remarkable facts about the heroisms of the British Army in its struggle for the capture of Kut-el-Amara, or familiarly known in army and East Indian circles as "Kut."

For five months of the year the thermometer in that region averages about 130 degrees and the humidity is so high that the power of this heat is far greater than the same degree of heat in some parts of India. There is one point in India where, with a temperature of 130 degrees without humidity, the brass railing on cars or other vehicles in the sun becomes so intensely hot that if an uncovered hand grasps the railing it is immediately blistered as by a hot iron, and yet in the struggle for the capture of "Kut" the same degree of temperature with the added suffering of humidity had to be endured.

In this struggle to reclaim from Moslem control and Turkish and German domination the cradle of the human race—for it was in that section that the Almighty first breathed the breath of life into man—the English troops endured untold suffering. The Euphrates is a river without banks. At the time of heavy rains it overflows and stretches out, like some portions of the Mississippi, for a hundred miles or more. The final fight for the capture of "Kut" was carried on at a period of overflow, when the army could move only in flat boats largely improvised for the occasion because the water was more than waist deep and covered vast stretches of land.

In the final march which ended in the capture of Bagdad the English army moved ninety miles in three days, despite the fearful heat prevailing at that time. This is a record probably unequalled in the history of any war of the world.

The capture of Bagdad marked an epoch of tremendous importance in this war because it changed the thought of the Mohammedan world from alliance with Germany to a recognition of the fact that Germany was not supreme. It may have been the saving point in preventing a "holy" war of all Moslems, under the leadership of Germany, against Christianity.

Bagdad is a city of 150,000 people, of whom about 30,000 are Jews, though a thousand years ago it had a population of about 2,000,000. The decline in population from 2,000,000 to 150,000 has been due to the fearful atrocities of the Turks as they have waged their unceasing warfare of murder and loot against the Armenians and against all of the regions which they have dominated. They have lived by pillage and by murder and by crimes even worse.

Immediately upon the capture of Bagdad law and order were restored by the English. The English army gave to that part of the world an illustration which it had not known for a thousand years as to honor and integrity and payment for the things it used. In contrast with the robbery and pillage and murder of the Turks, it paid for what it bought. It began to clean up the city, to improve its sanitary condition, to clean its streets of dirt and filth, and in doing all of this it re-established the confidence of the inhabitants and brought an entirely new influence into that part of Mohammedanism, for Bagdad had for centuries been regarded from many points of view as the dominant city of Islam.

Some years ago, when the atrocities of the Turks

against the Armenians had become so fearful that the civilized world apparently could no longer stand such crimes, a concert of the Powers of Europe was arranged for their suppression by forcing upon Turkey a demand that they should cease. Every European Power agreed to join the movement except Germany. Germany alone stood out and refused to unite in the suppression of Turkish atrocities, and the bribe which Germany received was the privilege of building the railroad to Bagdad, with such other assurances as Turkey could give of co-operation with Germany. The Kaiser visited the East and proclaimed himself the defender of Islam, and, according to a statement made some months ago by Dr. Newell Dwight Hillis, definitely allied himself by membership with the Mohammedans through a religious ceremony in the city of Constantinople.

The English East Indian army, which at the beginning of the war, inadequately equipped and without transportation facilities, moved toward Mesopotamia, hoping thereby to cut Germany's line of communication with the Moslem world and to strike a death blow at the effort which was being made to bring on a holy war on the part of all Islam against all Christians, performed deeds of heroism which should make us ashamed to boast of anything which our troops have yet been able to do on the battlefields of France. Fighting day after day, with inadequate food, inadequate supplies of every kind, without transportation facilities and in a temperature of 130 degrees in one of the most barren regions on earth, which produces nothing of food upon which an army could depend, this heroic force continued its campaign, sometimes halted and sometimes defeated, but, with its bulldog tenacity, never stopping until it landed in Bagdad. And now, to the surprise of the world, there comes the announcement that this same British East Indian force has pushed on through the wilds of that desert land and captured the great oil center of Russia. In doing this it has given another blow to Germany's power. It has still further strengthened the forces of Christianity to make null and void the work of Germany and Turkey in their effort to unite the Moslem world, with its hundreds of millions of devotees, in a war upon civilization of such ferocity as the war which Turkey ever wages upon Armenians and all other Christians who stand in its way.

When the war is finally won the fight in Mesopotamia will be recognized as one of the deciding struggles of the campaign of civilization against barbarism, and without which success on the Western front would probably never be achieved, for had Germany and Turkey been able to carry out their plan of enlisting the hundreds of millions of Mohammedanism in the contest against Christianity the world might ere this have been under the domination and the damnation of Germany and its co-partner, "the unspeakable Turk."

OUR COUNTRY NEEDS TO BE UNIFIED.

SOME of the suggestions are wise, but there is one for the discontinuance of all free exchanges, which we think very unwise. Of all times in its history our country now needs to be unified, and there is no other agency which can so effectively bring about this unification. On the editor's exchange table views from all sections of the country meet, and the local paper can carry to its readers the thought of the nation; whereas, if free exchange is not allowed, the papers that do not get the Associated Press service will of necessity have a local coloring, and this will affect their readers. All possible economy should be practiced, but it would be unfortunate to abolish the exchange table.—Biblical Recorder.

The position of the Biblical Recorder in this suggestion that the War Industries Board has made a mistake in advising the discontinuance of all exchanges is, we believe, absolutely correct. It is the position held by the MANUFACTURERS RECORD from the beginning of this paper-saving campaign. A free exchange of thought and the opportunity of studying what the papers are saying are essential elements in working out a unification of the nation. The zone postal system was a distinct blow against national-

ization, and this condition would be increased by the cutting off of newspaper exchanges.

The MANUFACTURERS RECORD has about seven hundred papers on its exchange list. It could save several thousand dollars by cutting off every one and subscribing for those it actually needs, but we believe that in the end we would be the loser, and the country also. This wide exchange of news and views is helpful in our work of studying the whole country, in the country town as well as in the city, and we feel sure that many of our country exchanges find the MANUFACTURERS RECORD invaluable to them, especially in these war times.

The War Industries Board has made a mistake and should reverse this decision.

"CON-DAM-NATION."

THE coining of a new word by accident makes one which exactly fits the needs of the hour. In a letter received from the ambassador of a foreign government expressing his appreciation of the War Eagle Series of editorials he intended to use the word "condemnation," but by the typewriter's mistake it is changed to "CON-DAM-NATION."

These editorials, says this ambassador, are well worth keeping "and are a well-expressed condemnation of the barbarous deeds of the Germans."

The typewriter who made this mistake coined a word which admirably fits the situation. It is infinitely better than condemnation. It can be divided into syllables in a way to make it very expressive—"CON-DAM-NATION" or "CON-DAMN-ATION."

We adopt this newly coined word with great pleasure.

Molding Sound Public Opinion.

[Wm. C. Cornwell, Editor The Bache Review.]

The making of sound public opinion is the salvation of a republic, especially in time of great crises, and the greatest debt is due to those editors who, since August, 1914, have been pointing out the iniquity of the German cause, even through the distressing days when the United States was tied down to neutrality and apparently stupefied with German propaganda.

Then the most thoughtful people were sweating under the leashes, burning with righteous indignation against the brutality of the conscienceless Huns.

Now that the turn of the war has come and defeat begins to make the German staff tremble, it is of the greatest importance that the public should have its opinions stabilized against a negotiated peace and firmly set to demand only the most rigid justice meted out as a verdict against the outrageous and high-handed iniquities of Germany.

Innocent blood, mercilessly spilled in torrents during four years of atrocities, cries out against any other settlement of the war.

In dictating terms to the destroyers of the world's peace (after unconditional surrender) it must never be forgotten that German unity, if not effectively and permanently destroyed now, will inevitably crystallize for a repetition of the frightful scheme of world domination, no matter how long it may take to recover.

The MANUFACTURERS RECORD of Baltimore, which is a power in the industrial world, and especially in the South and Southwest, has been since the very beginning of the contest courageously and persistently pointing out the iniquity of Germany. This has been accomplished mainly through the powerful editorials of Mr. Richard H. Edmonds, the editor-in-chief. In one of these, lately printed, he calls attention to the unseen power of WILL put out to poison the minds of Americans. That the German plan has included the use of will-power in all the long years through which Germany was getting ready to rush upon an unprepared world and grasp the fruits of brutal plunder, the German people have been called upon to use every influence of mind to subsidize the rest of the world; and since the war began the German nation has been urged incessantly to use its will-power to overcome the enemy.

Sixty carloads of dyewood from which olive-drab and khaki color for U. S. army uniforms will be made have arrived at New Orleans from Sonora, Mexico. Another 30 carloads are on the way.

What Our Soldiers Are Doing "Over There" When Off Duty.

Mr. Frank Thompson of the Monroe Advertiser, Forsyth, Ga., writes to the MANUFACTURERS RECORD as follows in connection with a clipping which he sends: "Knowing your desire to do everything possible for your country and efforts to offset the least thing that can tend to demoralize the people in regard to the glorious efforts of our boys 'over there,' I am sending you a letter I clipped from a little Georgia weekly from Lieut. Timon Bowden. I consider it a pretty strong refutation of the charge that the morals of our soldiers are left with their old clothes when they join the army and that they are a God-forgetting bunch when they are thrown together in large numbers. If any man can read this letter through without a tear showing in his eyes he is either stranger or more heartless than I. The expressions are noble, and come from a heart and soul full of God-fearing patriotism. If you have room for it and think it worthy, publish it, for it may comfort many a poor father and mother who are fearful lest their 'boy' may never give the higher things of life a thought in battle."

The letter from Lieutenant Bowden to his father is indeed calculated to touch every heart and bring tears to the eyes of every lover of our beloved men "over there." May God bless the writer of that letter and every other man "over there" who is seeking to do his duty to God and mankind. Omitting the little personal family touches, the letter is as follows:—Editor MANUFACTURERS RECORD.

France.

Sunday, July 7, 1918.

My Dear Papa:

Late yesterday afternoon I walked up the road a few miles toward the front to a little village that the Germans had ravaged some time ago. And under a grove of trees were a group of American troops resting, on their way back from the front, and they were singing:

"Abide with me,
Fast falls the eventide,
The darkness deepens,
Lord, with me abide."

The last time I heard this was back in McDonough; this time it was "somewhere in France." My ears, still warm from the thunder of battle, eagerly drank in the soft cadences of the old familiar hymn. The major commanding the column, his officers by his side, stood just where I was on the fringe of the gathering, in the darker shadows, but dimly seen. Many of the townspeople were collected, scarce understanding, yet held in a spell by the soft sweetness of the music. And never before in alien land had home come back to me as in that twilight hour.

For a moment or two the singing ceased; the hymn was ended. The roll of the guns but a mile or two away seemed strangely unusual; even they were silent. A few low, crooning notes—scarce a whisper, like the sighs of the night wind in the tree tops—and then came to those who had listened:

"Lead, Kindly Light,
Amid the encircling gloom."

Who in this world to whom these lines were familiar could have remained silent? Many had been content only to listen to the previous hymn, but with the gray shadows deepening around us until all was indistinct no mortal so dulled but stretched out its being to the great God of battle.

Over the old square lined with high-pitched gables, its quaint old church tower a shapeless blot on the sky, against which the lurid light of battle stabbed the darkness, the plea for guidance rolled on and upward to the very gates of Heaven. No rank or file there, but one great appeal from the very human souls of that wayside group—indeed, a song of prayer wrung from those who felt that amid the

dangers so real, so near, only One Power could lead them in the way of safety.

That song ended, the circle began to waver a bit, but the soldiers were loath to break the solemn spell cast by the soul-stirring words. "Just another, sergeant," someone pleaded. The circle steadied, and for a moment the guns were silent. Then, with a deafening crash, a nearby "Howitzer" rent the very heavens and lit the sky for an instant with blood-red glare. There was the silence of awe, then

"Onward, Christian soldiers,
Marching as to war!"—

The sergeant felt the call of the guns and boldly led that song of battle. That sound of terror so close, so compelling, had roused in every heart the dread call that has taken them far from home, from ease and safety, from friends and families; but these be the things for which we fight.

And it is onward we are going. There is no doubt in our minds, no hesitation in our actions. No fear can be allotted to these brave lads who, in this remote part of France, sang again their hymns of prayer and praise.

To some, perhaps, their words had almost faded from memory, but from home and Sunday-schools and churches, too, the lines came echoing back over all the years.

The last line had died away, echoing up the narrow streets. "America!" shouted the sergeant. Sharp to attention came the soldiers, and "America" rang out as clear as a bugle call, and so ended that gathering of pathos and devotion.

Slowly I started back for my village. The houses grew smaller as I reached the outskirts of the town, and blank darkness, with all its hidden dangers, lay in front of me. For a moment a soft glow from the guttering candle of a wayside shrine picked out a figure whose coat of blue told me a comrade of France sought comfort there in prayer. And I felt as if again a child, when I, too, knelt in prayer at my mother's knee, and I felt like singing:

"Lead, Kindly Light, amid the encircling gloom,
The night is dark and I am far from home,
Lead thou me on."

Yes, sir, it will make you think a bit when you are what you term "over there." But we have got the old "Bosh" by the neck now, and it won't be long before we will be "over there," and we all want it to be soon.

TIMON.

How Germans Stole American Drawings and Inventions Suggests Great Care as to Patents and Otic Employees.

Standard Pressed Steel Co.,
Manufacturers of "Standco" Hollow Set Screws, Unbreakable Steel Shaft Hangers, Milled Cap Screws, Etc.

Philadelphia, Pa., August 11.

Editor Manufacturers Record:

I certainly count the minutes between issues of your interesting MANUFACTURERS RECORD. It should be read by every true American, whether man, woman or child. I am interested in the boycott movement, and believe that we should carry it a little further than what has been contemplated. My suggestion is that we not only refuse to buy German-made goods for a certain period, but that we should also guard all the American inventions.

The beginning of this great war found Germany with many inventions of Americans, British and French in their possession. Before America entered the war, people marveled at the great submarine, airplanes, tanks, pedoes, machine guns, high explosives, harvesting machines and engineering feats the German army had. To these people this was the greatest kind of efficiency as they shuddered with the thought that it was the Germans that possessed it. Of course, this was all German propaganda to make Germany a nation to be feared by all the earth.

The Hotchkiss gun, Colt automatic pistol, the Lewis machine gun, Maxim and Gatling guns are all American inventions. In fact, the cylinders for loading the Krupp guns is an American invention. There are hundreds of others too numerous to mention. So you see that the really great country of the world is and always will be America.

Therefore, the question arises, How did Germany get these drawings of American inventions? Oh, yes, one man. I remember a German draughtsman our company had back in 1910. He used to be in very early in the morning, possibly two hours before time, and would work late at nights "for the good of the company," as he would put it.

Another said yes, we used to have a very good chief mechanic of German birth that had all the secret processes of our company in his desk or safe.

Still another said, if I remember correctly, about five or six years ago we had a German production manager and a German steel-hardening man.

Thus it goes, and where are these men today? Back in Berlin or at Krupps working tooth and nail to outdo the Americans with their own inventions.

My whole thought is to be very careful in the future as to whom you may hire for certain positions in your plant, and especially watch the men placed in your drafting-room, production department, master mechanic, hardening man and sales manager.

Therefore, let us all unite and think about the men in the above departments, but do not think too long. I believe that by doing this we will avoid any other nation from becoming so great as to challenge the world, such as the old sneak in Berlin has done.

Awaiting any reader's reply, I am,

Very truly yours,

A. J. KNEB.

Purchasing Agent Standard Pressed Steel Co.

Quicksilver Production in Texas.

Austin, Tex., August 16—[Special.]—J. A. Udden, Ph.D., director of the Bureau of Economic Geology and Technology of the University of Texas, has just returned from a visit to the Terlingua quicksilver district situated in the upper border region of the State, where he made an examination of the different production properties and claims that are being developed. He said that there are at this time four producing mines in the district. They are owned by the Chisos Mining Co., the Big Bend Mining Co., the Marfa-Mariposa Mining Co. and the Ellis interests. The Chisos Mining Co. is operating two furnaces and is keeping up its record of being the largest producer of cinnabar ore and quicksilver in the district. Two new groups of claims known as the Wallengerger and Chisholm properties and owned by L. T. Millican of Denton, Tex., and associates are now being developed in the Terlingua district under the direction of James Lafaralle, an experienced mining engineer, who was formerly in charge of the Chisos mine.

"Germany and German Sympathizers Staked Their All Upon an Unmoral and Immoral Issue" and Must Be Made to Pay the Price.

John C. Hebben,
Chemical Engineer.

Providence, R. I., August 15.

Manufacturers Record:

I have read with a great deal of interest your letter of August 6 to the editor of the New York Evening Sun and August 9. I wish to compliment you on the clear and forceful argument which you have made, and would like to add a further argument in support of your position.

The South was compelled to repudiate its debt and participate in the payment of the taxes necessary to defray the expenses of the war, not as a punishment, but as a necessary and logical sequence of defeat. Thus the parallel between the South and Germany can be drawn no farther. The issue raised in the South of efficiency and of the Civil War cannot be compared or which brought on the issue raised by Germany which brought on the present world war. However we may differ in our views with reference to the right or wrong of the issue raised by either party to our own great conquest, we can hardly charge either with an unmoral or immoral purpose.

Prussia has been defined as that nation whose national industry was war. Frederick the Great, following the Prussian doctrine, despoiled Poland for the profit of Prussia. Bismarck preached the doctrine that in order to make Germany great three wars would be necessary. He fought these three wars and despoiled three other nations and thus founded the German Empire. William the II improved upon Bismarck's method, formed an alliance with the commercial and scientific forces of Germany and started out, as his spokesman Bernhardt says, to attain world power or downfall. To attain this ambition it was the purpose of Germany to despoil the rest of the world as Poland, Denmark, Austria and France had previously been despoiled. That this doctrine was and is now accepted by the German people there is sufficient evidence.

Personally I have been told repeatedly by responsible Germans "that before Germany attained her destiny"—and these Germans were convinced that she certainly would attain this destiny—"it would be necessary for her (Germany) to whip both England and the United States."

The Frenchman in the eighteenth century could rightly say "that the national industry of Prussia was war," but the whole world outside of Germany and her allies in the twentieth century should recognize that the Imperial industry of Germany is war, and that the German people, from the Kaiser down, have stated and subscribed boldly to this doctrine; they all believe, as did the Great Frederick, that war as waged by Germany is waged for profit. This is the unmoral and immoral ambition and purpose of Germany, and for this German autocracy and Germany should be punished.

Germany has financed this war largely on internal credits. Those people outside of Germany who have subscribed to German loans have made their subscriptions knowing Germany's purpose and ambition; they have agreed with, approved and encouraged her policy of conquest; they have subscribed to her doctrine of force; they are equally guilty; therefore, any repudiation of German debt or any terms of peace enforced by the Allies which would determine a repudiation of Germany's debt cannot be claimed by either the Germans or German sympathizers as unjust. **Germany and German sympathizers have staked their all on an unmoral and immoral cause. Let them be pun-**

ished for the misery, suffering and bloodshed which they have brought upon the world.

The German doctrine that war is profitable or that war can be profitably waged, either for conquest or aggrandizement, must be denied. The German people must be shown that they cannot live in the comity of nations if they subscribe to or uphold this doctrine; the free and democratic nations must declare that never again shall a war for profit be permitted. After the Germans have in sackcloth and ashes done penance for the wrongs which they have committed, and only then, will the German people realize the enormity of the crime of Germany against the free people and against the subject nations of the earth. The best way to prove this to the German people is to make the peace terms which you suggest in your letter.

We in America subscribe to the ideals of individual freedom and liberty. Our ancestors in Great Britain settled the question of the Divine Right of Kings, which is synonymous with the present German doctrine of war for profit, when the head of Charles I fell into the basket. The founders of the government of our nation revolted against a German King because of his attempt to revive the kingly prerogatives. The French people attained their freedom from an autocracy also by chopping off the head of a king. Shall the free peoples of the world permit the autocrat after the present titanic struggle to ever again raise his voice or to permit the autocratic notion to exist? Autocracy must be cast into the junk heap, together with serfdom, slavery, the inquisition, arrest without due process of law, and all the other evils and burdens of tyranny.

The twentieth century exponents of autocratic tyranny claim to be the most enlightened, the most efficient and the most highly civilized people on the face of the earth. Therefore, the crime which they have committed is the greatest. They in their hypocrisy brought on the greatest war of all history and preached war in the guise of peace. Their crimes are for these reasons the greatest. **Therefore, make the punishment so severe that all nations in the future may know and realize that war cannot be waged for profit.**

With kindest regards, I am,

JOHN C. HEBBEN.

A New Suggestion as to How to Punish Germany.

Editor Manufacturers Record:

The article by Mr. Richard H. Edmonds, copied from the MANUFACTURERS RECORD, in the Sumter Daily Item of August 10, under the head lines, "Victory and Punishment—A Great Danger to World Morality and Civilization," prompts me to offer for consideration of thoughtful minds throughout the world some thoughts that have been for months brewing in my mind but not uttered, to avoid being too premature. That article and the quotation below from speech of Mr. Lloyd George, June 23, indicate this may be an opportune time for such thought to be considered; that the democratic world may have its mind made up, and that representatives of the people who will dictate conditions of surrender at Berlin (now in the near future, it may be hoped, but eventually, anyhow) may understand the will and desire—the last will and testament of the peoples whose brothers are dying to bequeath peace—as to the manner of dealing with such aggressions as those of Germany's rulers and people; that our representatives may understand that our minds are made up on some settled policy or line of action which we will require be carried out.

"Be not deceived. God is not mocked. Whatsoever a man soweth, that shall he also reap." And this applies to us and the crop we shall sow after the con-

quest, as well as to those who have sown the wind, the whirlwind and the tornado among men, women and children world-wide. "The voice of the people is the voice of God," as the voice of Germany is the voice of her "gott"—the Devil.

Mr. Lloyd George in his London address said: "The mistakes you might make by entering on peace without preparation would be even more disastrous than the mistakes you might make by entering on war without preparation. The things that you will do will be more permanent. You will give direction to things, and though the world will be very molten at that time, it will cool down very quickly and the shape which you will give it will remain. And if your mold is not right, you cannot possibly set things right without another convulsion that will break it."

"We do not need any more break-ups. We are going to have done with them this time, and then we must get on with our work. But let us see that it is the right thing."

"Out of the agony of war let us see that no deformity is born—no militarism, no mammonism; no, nor anarchy either."

The above does not indicate any line of policy or practice to secure the results desired. Such a line of action, agreed upon, is the most important prerequisite to success or to avoid disastrous failure.

The purpose of this letter is to suggest for consideration a plan that occurs to me as worthy of consideration, and it is thought important to merely mention very briefly, to call attention to the need of some settled policy in advance of its application, so as not to be unprepared, mentioning only a few of the dangers that will menace us in the transition and plague us afterward.

Germany cannot make restitution—never can; nor restore a single one of the things of inestimable value she has destroyed and degraded worse than destruction. Yet Moses' law (the highest known) prescribes manifold restitution for every injury of the then known kind, by one to another. Germany should be made to do something. "The voice of God." Should it not also be "the voice of the people?" What can she do that would be commensurate or comparable with the injuries already done if she stopped now?

If the armies of the world were disbanded and so many millions of men turned loose destitute to find employment in the pursuits of peace, with all business more or less (mostly more) unorganized and unprepared by numerous conditions that will require time to alter, would it not bring great suffering, perhaps starvation, to many. Men thus suddenly released from the demoralizing and degrading conditions and habits of army life in war, and such a war and "Kultur," and especially those of central Europe and Asia, might be more difficult for civil governments to restrain than the embattled ranks are now. Anarchy, widespread or world-wide, might be one of the results.

The human family will soon need room for expansion. The Sahara Desert, of extent, and doubtless of fertility, if aided by water alone, to feed the whole world, seems to offer a very profitable and desirable means of avoiding the dangers of transition from world war to conditions of peace. It looks as if providentially made and kept for that special occasion, made to meet this emergency.

The teams, tools, machinery for ditching and all the paraphernalia, outfit and organization for carrying on war now in use by all the belligerents would no doubt be adapted to the work of irrigation. The place is easily accessible to all Europe, Asia and Africa needing it. Ships will be abundant to carry people there. France half a century ago was considering that work. Now is her opportunity and need as never before.

As many or few of the Allies as may desire might join in this work. All unemployed could find employment in the work without unbalancing other business, as would occur if undertaken at other times, and so allow business to begin and increase normally.

Every German and Austrian soldier and all pro-Germans should be put to work in the Sahara digging trenches they have learned to make in other lands, at wages enough to maintain them, and no more. I do not mean as chattel slaves, but as convicts, like the Israelites in Egyptian bondage, as some punishment not cruelly inflicted.

The majesty of the violated law cries to Heaven for vindication. "Let justice be done though the heavens fall," that generations unborn may know that we mean

it. The cruelty has already and is now being inflicted. Why should the justice we fight for not be administered?

And let the Kaiser wear a ball and chain and work in the ditch with the others. The families of all the convicts might be permitted to go with them. And when the work is done give them the teams and tools to go into the wilderness and build a civilization. If they build a better civilization than the natives and wild beasts and a better Kultur than they have in Germany, we can recognize and deal with them. Otherwise, "let them be anathema maranatha" henceforth forever.

The writer is democratic candidate for probate judge for Sumter county, South Carolina, who would with pleasure record such will of democracy without expense to them and requests all anti-German newspapers to copy this letter and send bill to this office.

A. G. WARREN.

Livingston, Sumter County, South Carolina.

Mississippi Striving to Grow All Wheat State Will Need.

Jackson, Miss., August 17—[Special.]—The day of the small wheat mill is coming back to Mississippi. Small mills are already in operation at Columbus, in Lowndes county; at Canton, in Madison county, at Oxford, in Lafayette county; at Indianola, in Sunflower county—there are four others on large plantations in Sunflower—and Jackson, in Hinds county will soon have a mill. Many others will be in operation when the next harvest is gathered. They range from ten barrels a day upward in capacity, and are driven by small gas engines.

And the State is going in strong for wheat-growing this fall. From every section come reports that the farmers are readily pledging themselves to plant their share of the State's acreage, and no fear is expressed that the demands of the Government will not be met.

Bumper spring wheat crops in the State, one of them averaging 60 bushels to the acre for three acres, have stimulated interest, and an average yield of thirty bushels to the acre is expected, where farmers exercise ordinary care in planting and cultivating the crop.

The patriotic has been combined with the practical in appeals to the farmers. They are being told that the boys on the other side need the wheat from the great wheat-growing country of the nation and need the engines and the cars that used to bring us flour from the Middle West, and at the same time they are being threatened with losing their own biscuits and hot cakes next year if they don't plant wheat.

It is the confident belief of some of the best-informed agricultural men in the State that it is possible for Mississippi to grow all the wheat for her own needs easily, without interfering with any other crop-production, and this theory will be put to a thorough test this fall.

Few Mexicans Coming to Relief of Texas' Labor Shortage.

Austin, Tex., August 18—[Special.]—For some unexplained reason there has been a big falling off in the flow of Mexican laborers into Texas from their native country recently. The movement which began so auspiciously a few weeks ago under the relaxed immigration regulations, having for its purpose the relief of the labor shortage in this and other States, has suddenly weakened until there are now comparatively few of the alien workers entering this country, it is authoritatively stated.

E. A. Peden, Federal Food Administrator for Texas, says that the labor situation in this State is becoming acute. He is endeavoring to formulate plans for expediting the securing of men for the farms, railroads, mines and war industries from the other side of the Rio Grande. The need of hands upon the farms of Western Texas, where it is necessary to save every ounce of food and feed products in order to relieve the condition of the farmers who were seriously affected by the long drouth, is urgent. He says:

"The farmers of Texas who have so gloriously planted and cultivated large acreages in the patriotic win-the-war spirit are entitled to have every particle of their yield saved," he continued. "The food, the feed and the cotton must be harvested to the last pound. It is all badly needed. My effort is to get them all the labor possible and all the help they need."

Miracle Army of Czecho-Slovaks Inspires Hope for a Russia Redeemed

[Special Correspondence Manufacturers Record.]

Washington, D. C., August 16.

The political and military attention of the Allied Governments and of the United States is being turned more and more to the strange upheaval in Russia. Less than 30 per cent. of a subject Balkan race is forming the ferment that promises to regenerate hopeless Russia. What France, England and the United States refused to do is now being accomplished by the Czecho-Slovaks in isolated fighting groups in the extinct Russian Empire. These are the Czechs of Bohemia and the Slovaks of Northern Hungary, who for 1500 years have had the distinction of being Germany's bitterest enemies and opponents. Driven by enslavement, by tortures and death, they were forced to fight by their Austrian and German overlords, their brothers the Serbs, and their friends the Rumanians. But of these, 35,000 managed to desert to the Serbs in the beginning of the war, and of these the remnant of 12,000, after the bitterest privations, finally reached France and Italy to form the nucleus of the Czecho-Slovak divisions on the Western front and under the mountains of Austrian Italy.

After the Serbian campaign, the Austrian armies made Russia their main objective, and in the three years of warfare about 300,000 Czecho-Slovaks deserted to and were captured by the Russians. These are our allies today, who are fighting from the shores of the Caspian to Vladivostok to save Russia from fanatics and to oust the infiltrating Germans from their new empire in the East. Here are the last known facts in regard to these miracle armies.

There is an army of 15,000 Czecho-Slovaks in Vladivostok. Supplied with abundant ammunition and supplies, they have moved north and occupied the Nikolai junction of the Amur and Manchurian Railroad. They are confronted there by an army of German prisoners and Bolsheviks of about the same number, and cannot move without an adequate supporting force of our troops and Allies.

In Eastern Russia there is a force of about 90,000 Czecho-Slovaks who, after the capture of Penza, were able to amass sufficient arms, ammunition and supplies to occupy Kasan, Simbirsk and Samara on the Volga, thus cutting off the Germans from Siberian supplies, the metals of the Ural Mountains and the cotton of Turkestan. They also control the railroad from Samara to Irkutsk, on Lake Baikal, a distance of 2500 miles.

Besides, according to the latest advices from the Czecho-Slovak bureau in Washington, there are at present about 100,000 Czecho-Slovaks in isolated groups in Russia who know little or nothing of the course of events. These are gradually being found and recruited. Between the two fighting groups lies 1500 miles of territory occupied by hostile Bolsheviks and Germans. "With luck," said the secretary of the Czecho-Slovak National Council to the MANUFACTURERS RECORD correspondent, "the distance might be overcome in the course of five weeks by the support given by the Allied forces." This would mean that the Czecho-Slovak armies would make a juncture at Vologda, moving westward from Perm, and then receive supplies from the Allied forces at Archangel. In this case, Moscow would fall and with it the whole Lenin-Trotsky-Bolshevik structure, that is now only supported by German armies.

At present there are only three forces in Russia fighting the Allies—the Bolsheviks, the Letts and the Germans. The Red Guard will not fight. If Moscow is isolated, as is now expected, it will fall to the Allies without a struggle.

At the present writing a great battle is being fought by the Allies of the Bolsheviks and the Czecho-Slovaks in western Russia, and on its outcome will depend for months to come the despair or the regeneration of the Russian people. "Frankly," said the secretary, "I am scared to death."

So for months, ignored by us who are fighting for the freedom of the world, these heroic bands have maintained the Allied cause in lost Russia, and have conquered its richest territory. History cannot duplicate such a miracle of transformation. While the govern-

ments of the Allied nations hesitated and ignored, the gallant patriots fought on, unrecognized, unsupported, often with bare hands, and alone. At last the hour of their recognition has struck. President Wilson said, "I intend to stand by Russia." But at that time there was no Russia. It was Germany. Then suddenly it dawned upon the Allies that the Czecho-Slovaks had carved out of a German empire a new Russian entity which the Allies could and must recognize and support.

The tardy recognition of this Czecho-Slovak nation, transferred out of its own borders into an alien opportunity for reconstruction, is the one thing that will stimulate enthusiasm and hope throughout the enslaved Austrian provinces. It spells the doom of the Dual Empire.

President Grant declared when he urged the recognition of the Cuban insurgents that "there must be above all, a de facto political organization of the insurgents sufficient in character and in resources to constitute, if left to itself, a state among nations capable of discharging the duties of a state and of meeting the just responsibilities it may incur as such toward other Powers in the discharge of its national duties." France, Italy and now England have given the Czecho-Slovaks this recognition, despite the fact that the nation has no independent habitat, and no present form of government. They thus recognize a new principle in international law, the principle that opportunity to win independence is nigh to independence itself. The United States has finally granted these gallant expatriated allies the physical and moral support of an army. It ought not to be illogical, considering that there are 10,000,000 of them fighting and aspiring to freedom, to add the political recognition that England has just granted. It is the recognition of a new nationality that is winning its freedom on foreign soil, because its own is still enslaved. The free power is no braver, no more aspiring, no more resourceful ally than the Czecho-Slovaks. In this case precedents should be thrown to the winds, and rigidity of international practice abandoned. With a few words we can slice the Austrian empire into bits and bind peoples aspiring to freedom to us for our national life.

The Government's Ship Insurance Activities.

Washington, D. C., August 19—[Special.]—Approximately \$30,000,000 in insurance premiums has been set aside by the U. S. Shipping Board during the past year for the purpose of giving protection to the Government against the perils of the sea by a system of self-insurance.

For little more than half a cent for every dollar of value the Shipping Board is insuring its vessels against the ordinary marine dangers, while an additional four or five cents for every dollar of value covers the war losses, such as the sinkings by the U-boat raiders, the floating mines which now constantly menace shipping and the attacks of enemy warships.

To the present date the losses suffered by the Shipping Board vessels totals about \$13,500,000, among the largest disasters being the sinking of the "Westerly" on her maiden voyage, due to a collision in mid-ocean. The value of the ship and cargo amounted to \$1,500,000.

Four of the former German liners taken over by the Shipping Board, and which have been the object of the bitterest pursuit by the Hun sea pirates, have been lost, totalling in their value \$6,750,000. The steamer "Fleance II," which was lost in a French port when her cargo of chemicals became ignited, was worth \$1,000,000.

Before the war German, Russian, Australian, Swiss, Chinese, Japanese and British companies did the principal business of the foreign marine insurance companies in the United States, the largest company being Lloyds of London. The German interests, of course, have since been taken over by the United States Government. Such marine insurance in the United States as is not provided by foreign companies is being handled by American concerns or under the self-insurance plan.

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Amazing Magnitude of Government's War Insurance Total Policies in Force Reach Nearly \$28,000,000,000.

[Special Correspondence Manufacturers Record.]

Washington, D. C., August 16.

Under an act of Congress, approved October 6, 1917, persons in the active military and naval service of the United States are given the right to take out insurance with the Government. At that time there were only 40 paid employees in the Government insurance business, occupying two rooms in the basement of the Treasury building. Today Uncle Sam's insurance business has 20,000 employees, occupying all or parts of 12 buildings. Of these, 3,000 work at night. It keeps 4,200 typewriting machines going all day.

Up to the present date, August 16, there have been 2,229,450 applications for Federal insurance. The average number of applications is 18,000 per day. The whole amount of insurance taken out amounts up to the inconceivable sum of \$27,787,407,500. The average insurance on each man is \$8578. At least 90 per cent. of the present enlistment have taken out insurance, and the department believes that in the next draft, under the new act to be passed, 100 per cent. will take out insurance under the Government. This means that in less than a year's operation the United States is conducting an insurance company at present more than equal, and soon many more times the insurance of all the legal reserve companies in this country. Up to the present time \$140,000,000 have been paid out in allotments and allowances. Five million checks have been sent out, and the average of payment rises to 1,000,000 checks per month.

The insurance paid up to date on deaths is relatively small amount, but when it is realized that this is paid in 240 monthly installments at the rate of \$57.50 per month, it accounts for the small total of disbursements. To illustrate the amount of business that is being done, from August 1 to August 15 \$2,000,000,000 of insur-

ance was taken out. From now on it will average \$1,000,000,000 per week. When it is remembered that only \$1,000,000,000 worth of insurance was taken out on the soldiers in the Civil War, the gigantic task that the Government has undertaken can be well appreciated.

The question of storage itself for the millions of applications, the tons of folders, the innumerable letters received, has robbed this department of space needed for employees. The New National Museum, which has been taken over for this bureau, has not floors strong enough to store this dead weight. Each day brings over 30,000 applications for allowances and allotments, each one of which has to be checked back and reduced to a card-index system.

From 400,000 to 800,000 soldiers will all file their application papers during this month of August. Of these 40 per cent. will have families to be immediately dealt with in allowances and allotments. Although the present force of 10,000 is still far behind in the work, the clerical force is improving so fast in this new complicated Government business that it is expected comparatively few will need to be added to the office force to meet the new emergency. While the exact figures of allowances and allotments of insurance and compensation have not been made up since July 23, the following statement of the total payments up to that date may enlighten the country as to the amount of aid given. This covers the Army and Navy, the Marine Corps and Coast Guards. Allotments to the amount of \$80,482,280.05 were paid out, and \$51,706,226.21 paid on allowances, totalling \$132,188,515.26. There was paid out \$1,235,049.50 on military and naval insurance, and \$1,766,887.22 for partial or total disabilities. It is understood that the Act of October 6, 1917, was retroactive to the first day of the war.

CARBOCOAL FOR GOVERNMENT.

New York Company to Build Big Plant at Clinchfield, Va.

New York, August 20.—[Special.]—What is looked upon as being a long step forward in the way of conserving coal and the recovery of the valuable by-products that are contained in high volatile bituminous fuels in the establishment by the Government of a by-product "carbocoal" plant at Clinchfield, in the south-west section of Virginia, adjacent to the well-known Clinchfield coal regions.

At this plant, by a new process of low temperature distillation, bituminous coal is to be treated in such manner as to recover greater quantities of the valuable by-products, such as toluol, sulphate of ammonia and valuable oils, than is now possible by methods in commercial use. From the residue of the coal left after extraction of the oils will be made a most valuable smokeless fuel. Carbocoal, the name adopted for this new fuel, is produced by a new method of coal distillation in which there is simultaneously obtained from the coal a sufficient quantity of valuable coal-tar products to largely offset the cost of converting the raw coal into this refined smokeless product. These volatile hydrocarbon products, which are the smoke-producing elements in coal, have other values far in excess of their fuel value. When separated and refined, they include motor spirits, benzol, toluol, naphthas, creosotes, tar acids, lubricating and fuel oils, ammonia, and many other products.

As the coal in this region, from which the above-named products are recovered, runs approximately 34 per cent. in volatile matter, the residue, some 70 per cent. of the original coal, which is largely pure carbon, will be carbonized into briquets. They will be used by our navy and merchant ships. Carbocoal has been tested by the navy, and has been found to make a most valuable fuel for use of our ships, due to the reason that it is smokeless, containing less than 4 per cent. of volatile matter, and, moreover, that it will work most satisfactorily where there is limited grate area and restricted boiler capacity.

The new plant, expected to be in operation early in 1919, is being built near a junction of the Carolina,

Clinchfield & Ohio and the Norfolk & Western railways, which will give the output a short and direct route to two seaboard ports, Charleston and Norfolk.

Work has already been started at the plant site and contracts for all equipment and construction work have been let. As all the equipment and materials will move under priority orders, it is not expected that there will be any delay in the completion of the plant.

The authorization of the construction of this plant by the Government resulted from the most exhaustive investigations by members of several Government departments.

By the Smith process, the enormous tonnage of bituminous coals can be refined at reasonable cost into a completely smokeless fuel of uniform size, possessing the free and efficient steaming qualities of bituminous coal and the hardness and density of anthracite. The supply of smokeless fuel for domestic and city use is therefore assured after our present anthracite fields are exhausted.

The essential features of the Smith process, which will be used, are the two distillations carried on at different temperatures, first of the raw coal and second of the raw briquets. The raw coal, after being crushed, is distilled at a relatively low temperature, 850 to 900 degrees F., and the volatile content is thereby reduced to the desired point. The result of this first distillation is a large yield of gas and tar and a product rich in carbon, termed semi-carbocoal. The semi-carbocoal is next mixed with a certain proportion of pitch obtained from the tar produced in the process, and this mixture is briquetted. The briquets are then subjected to an additional distillation at a higher temperature, approximately 1800 degrees F., resulting in the production of carbocoal, the recovery of additional tar and gas and a substantial yield of ammonium sulphate.

Various tests have been made of carbocoal, the fuel, by the Long Island Railroad, the Pennsylvania Railroad, the Carolina, Clinchfield & Ohio Railroad and by the United States Navy.

These tests, as well as two years of practical use, have demonstrated that carbocoal is an efficient, clean fuel, suitable for all purposes.

In view of the very heavy demand of the Government for the chemical properties that form the bases of explosives, all of which are to be found in the by-products

of coal, the total yield of tar by the Smith process has proven most interesting. Coal containing 35 per cent. volatile matter produces more than 30 gallons of water-free tar per short ton.

The toluol yield has been found to be almost double that of the by-product coke oven and gas practice, and a satisfactory method has been established to remove the paraffines from the light oil, thus offering a chemically pure product.

The first unit of the new plant will have a capacity of treating several hundred thousand tons of bituminous coal annually. The plans for the plant and grounds allow for an eventual capacity of 1,500,000 tons per year.

The plant will be constructed by the International Coal Products Corporation of New York, of which Charles H. Smith, inventor of the process, is president.

The plant will be operated by a corporation, just formed, known as the Clinchfield Carbocoal Corporation. All of the product of the plant will be taken by the Government.

Contracts for the equipment were awarded to Bartlett Hayward & Co. of Baltimore; Link-Belt Company, Philadelphia; Malcolmson Briquet Engineering Co., Chicago, and Didier-March Company, Perth Amboy, N. J. Ford, Bacon & Davis, Inc., of New York, are the supervising engineers.

In this connection it is announced that the experimental plant of the International Coal Products Corporation at Irvington, N. J., is being enlarged, and that by October 1 this plant will be treating 100 tons of coal per day.

"Back to the Farm."

The Farm Land Merchants' Association of America, according to a copy of its constitution and by-laws received from San Antonio, Tex., where it was adopted in international convention last March, states its objects as follows:

"To unite the farm-land men of the United States and Canada with a view to securing intelligent and effective co-operation in matters relating to agricultural pursuits; to enable the members of this association to transact their business relating to the purchase, sale, rental and the care of real property generally, as well as the lending of money upon such properties, to better advantage than hitherto possible, by the adoption of such rules and regulations as may be deemed wise; to promote and maintain a high standard of conduct in the transaction of their business; to protect the public against the irresponsible or unconscionably unscrupulous by indicating upon advertising matter, stationery, signs, etc., their membership in this association."

A by-law provides that no one shall be finally admitted to membership without first furnishing satisfactory bank reference concerning character and integrity, and no one shall be permitted to remain a member who is guilty of questionable practices.

George T. Larson, official organizer, says that the first phase of the association's program, apart from procuring a working membership, is to start a back-to-the-land movement. To this end "back to the farm" committees are being installed in cities of 10,000 population and over, and when 25 members are enlisted the plan is advertised locally. It is further stated that where these committees have been installed the demand for farm homes is steadily increasing.

R. W. Polk is president; N. V. Dittlinger, secretary-treasurer, and Frederick Reutzel, counsel. There are 23 vice-presidents in as many cities throughout the country.

New Bessemer Steel Castings Foundry

Steel castings to the extent of 25 tons daily will be manufactured at Bessemer, Ala., by the National Steel Products Co. of Birmingham. A 150 by 40 foot mill construction building will be erected and E. King of Birmingham is the architect. General steel foundry equipment will be installed to include: three 5-ton geared ladles; four 150-pound straight ladles; four 200-pound straight ladles; six 100-pound welded taper ladles; eight 200-pound welded taper ladles; 60 by 30 steel tumbling mill; air compressor, electric driven with 200 volts three phase, alternating current; back saws; shipping hammers; portable core ovens, etc.

The National Steel Products Co. has organized with these officers: W. J. Long, president; J. D. Pirrong, secretary; R. S. Bohannon, vice-president and general manager; all of Birmingham. Proposals for the machinery are invited.

UNTIL HEAVEN MAKES PEACE WITH HELL, WE SHOULD NOT MAKE PEACE WITH AN UNBEATEN GERMANY.

Immoral Forgiveness.

[The Standard of Chicago, one of leading religious papers in country.]

A distinguished preacher of our denomination, now in France, recently said in a sermon, "the vice of democracies is that they do not get angry soon enough, they do not get angry enough, they do not stay angry long enough." In his last phrase he emphasized the danger of easy, immoral forgiveness. That danger is real, and at the present moment a serious one. There is a widespread impression among Christian people that forgiveness is always a virtue, never immoral. Such an impression is the product of loose and careless thinking, and in fact directly contrary to the teaching of the New Testament. Jesus says expressly and imperatively that God does not forgive the man who is still in the wrong. In the pictorial language of the parable, he withdraws his forgiveness from the man who proved to be himself cruel and unforgiving to his fellow-servant. Nor does Jesus ask us to do what God does not do. "If thy brother sin against thee, rebuke (not forgive) him. If he repent, forgive him." Divine forgiveness is not easy, good-natured overlooking of a man's real character, or accepting empty, lying words for deeds. It is the recognition of a new attitude and character, the product of genuine repentance.

The unforgiving spirit which persists in remembering past deeds, and refuses to take account of a new state of mind and character is indeed immoral, because it refuses to look at things as they are. But immoral also, not less dangerously immoral, is the refusal resolutely to face the fact that the wrongdoer is still a wrongdoer and for various selfish reasons coming to terms of peace with him. The judgments of God are according to truth, and those of righteous men must be so likewise. There is no virtue but rather immorality in shutting our eyes to facts.

The preacher was right. Democracies are not quickly enough roused to indignation against evil, they are not deeply enough moved with such indignation, they do not maintain their indignation long enough.

This danger of immoral forgiveness is peculiarly great at this hour. In the family of nations Germany has shown herself to be recreant to all sound principles of morality—a veritable criminal among the peoples of the world, and that not only in the sense of having national faults, as we all have, but of having deliberately organized her forces to rob and slay and despoil. She has made herself and now proved herself to be the enemy of the world. Civilization cannot exist, international morality cannot be successfully developed, while this criminal of the nations is abroad, garroting and robbing and murdering, her hand against that of every nation that stands in the way of the selfish and heartless ambitions of her military caste. Whether the German people share in the crime of her military leaders or not, they are both the victims and the instruments of its perpetration.

When shall we forgive Germany. Never, till she repents and gives clear evidence of repentance by the fruits thereof. When shall we welcome her to a place in the goodly fellowship of nations? Never, till she dethrones the Hohenzollerns and repudiates all their principles and their works. To accept her as our friend before this is done would be an act of moral weakness, an entrance into partnership with her evil deeds, a cowardly and immoral surrender of the principles for the defense of which we went to war and which alone justified us in doing so.

But if Germany should withdraw from the invaded portions of France, surrender Belgium and pay indemnities for the damage done, give up Alsace and Lorraine, release her hold on Serbia and Turkey, and with professions of peace and good-will ask to be received as an honorable member of the family of nations, surely then we would forget the past! Never, while Germany keeps her hand on Russia; never till there is in Germany a government that utterly adjures and repudiates the perfidy and the violence and the ruthless ambitions of the Hohenzollerns and gives trustworthy guarantees that her future promises will in the hour of stress be something more than scraps of paper.

Are we counselling a policy of hatred? By no means. We no more hate the criminal among the nations than

we hate the criminal in the nation. Of both we desire the repentance and reform and restoration to a useful place in human society. But in the one case as in the other we know that repentance and real change of character must precede freedom of action.

If through weariness at making sacrifices of blood and treasure, or through weak sentimentality, or through giving heed to the rumors and intimations that pacifists and German agents are insidiously circulating among us, we relax our efforts till Germany is, as Balfour has said, "powerless or free," we shall be false to the supreme duty of the hour, traitors to future generations. With all our hearts let us desire, labor for, pray for, the salvation of Germany from the demon of lust that possesses her. For her deliverance let us, if need be, give our lives and our treasure. But till that salvation is begun by sound and thorough repentance, beware of immoral forgiveness.

A Woman's Vigorous Warning Against the Crime of Pity for Germans.

[Gertrude Atherton in New York Times.]

We have now had four years' illuminating experience with the Germans, and we know that they are liars. The more they protest the less we believe them, the more keenly we search for the nigger in the woodpile.

But while we have brains to match the best, we also are a very soft and sentimental people. Ruthless while we have a great war to win, we are liable to violent reaction the moment we are positive that Germany is broken and can do no more than put up a long and stubborn defense. Then look out for the danger signals.

For the pacifists are still with us. And by the pacifists I do not mean societies existing under that name. They shot their bolt and are frightened into quiescence besides. I mean thousands of secret pro-Germans who are waiting their moment to work upon our sympathies and insure the ultimate triumph of their otherwise doomed fatherland.

In this city of New York there is a powerful group of women of German extraction who are now, to use a sadly overworked word, camouflaging themselves magnificently, and it may safely be said there are corresponding groups in every city of any size in the Union. These women contribute heavily (and with the utmost publicity) to war relief organizations. Before we went into the war they were equally blatant pro-Germans, or, seeing that didn't work, gave thousands to the "cause" of pacifism; in other words, to keep the United States from settling the fate of Germany. Now their new pose with the high encomiums the average citizen not realizing that anyone who remained a pro-German after the sinking of the Lusitania (charitably assuming that they did not know all the circumstances during the early months of the war) is hopelessly defective or crooked. Pro-Germans they must remain until the end of their days. They have inherited all the vilest mental attitudes of Prussianism, and God himself would not take the trouble to change them. However, He permits us to match our wits with theirs.

Now, the moment the Prussian hierarchy realizes that it is in its last precarious hole and makes the Allies a "reasonable offer," these women not only will make a passionate sobbing protest against any more "useless slaughter of our boys in Europe," but, what will be even more difficult for the soft-hearted Americans to resist, a plea in their sweet, reasonable voices (it is a curious fact that the German woman's voice is often as sweet as her eyes are small and crafty) for the "poor little children of suffering Germany." Listen, O you mothers, to the wails of those starving little ones, dying by inches, when peace with a conquered country could save millions of them! Oh, if you only knew what hundreds of thousands of them have suffered already! Tens of thousands have died of malnutrition. They are walking shadows. They are tubercular. They lie, living skeletons, gasping for a drop of milk. O ye mothers of America, think of your own children in a similar plight and have mercy!

Well, our children would be in a similar plight if Germany had her way. Such was the plight of the children of invaded France from August, 1914, until the battle of the Somme in 1916 rescued a few of these

animated little skeletons, living like gnomes underground, and few with either lungs or mental faculties unimpaired. Such would have been the fate of the children of all France and of the British Isles if the U-boats had not been the ridiculous failure they were in other words, if our wits had not been better than Germany's.

If the children of the Teutonic Empires are starving today—and it is quite true that many thousands have died of malnutrition—the crime lies entirely with the Kaiser and his crew, who have sacrificed them mercilessly. They will go on sacrificing them rather than lose throne and power. No matter what happens, the crime will be theirs, not ours. Moreover, it is the fault of the German people themselves. When they have the spirit to throw off the yoke, declare a republic, surrender the German navy as a guarantee of good faith, then we shall be delighted to pour food and money into Germany to save the starving babies. Meanwhile, under command of their conscienceless Government, they are producing more thousands of nameless babies, who starve in their turn.

It is not to be forgotten, when this insidious appeal is made to our sympathies, that German babies grow up into German men and women, who, if the present system of government persists, will be taught, as their millions of dead and maimed brothers were taught, that their only object in life is to follow the Kaiser into a war for conquest of the world. Better extirpate the whole breed, root and branch. And this, unless the German people come to their senses, is what we propose to do.

Only beware of the sob-sister appeal to save at any cost the lives of German babies that they may grow to manhood, and compel our male babies of today to shed their blood in the death struggle of the United States of America.

No Negotiated Peace Possible With an Organized Lie.

[Paul Dana in New York Times.]

I beg leave to repeat here two well-known reasons why no peace with Germany "by agreement," no peace settled at a council table where Germany has a seat should be thought of for a moment. It is not necessary to mince words.

The first reason arises from the revelation that the German people, because of the ideals they have cherished and the atrocities they have perpetrated, are an atrocious people. One can buy volumes of evidence that the Germans have come to look upon all other nations as German prey. As for veritable atrocity, from what I have seen, coupled with what I have heard from others who have seen also, I imagine that when the full story is told it will be worse than the story generally known today. I read a few days ago that, after seeing the marks of Hunnishness along the path of the recent German defeat, some of our troops were more eager than ever to reach Berlin. I could wish that on their way they might pass through Dinant, which I frequently visited when stationed at Namur as a member of the American Commission for Relief in Belgium. However revolting the horrors described in the Bryce report, probably the most awful monument which the Germans have so far left in Belgium is in Dinant—the Dinant cemetery. There our men will see the 500 graves that bear the date of the Dinant massacre. They will see the spot up to which the long file of men, women and children were driven, there to have every fourth or fifth one pulled from the line and shot. The cemeteries at Tamines and at Audenne, giving similar testimony, are not far away. The Germans are not a people for civilization to make agreement with, if that is humanly possible to avoid.

The second reason against negotiated peace with Germany is more academic in character, but perhaps of greater practical force. Such a peace would be an agreement between Delusion and Deceit. Mr. Balfour has accurately described the situation regarding Germany with the phrase: "German promise is no binding contract." The same idea is put in still more com-

August 22, 1918.]

leisure form by Prof. Gilbert Murray in a preface to a pamphlet containing Prince Lichnowsky's diary: "Never has the world seen so great an exhibition of the murderous and corrupting power of the organized lie." Since the Bismarck forgery that brought on the Franco-Prussian war of 1870, Germany has been an organized lie. The German name for treaty is "scrap of paper." Even Germany's own White Book shows that the statement that some other country began the war was a lie. German rage at the German-Americans who have refused to betray America to Germany shows that Germany has habitually looked on their oaths of American allegiance as a "scrap of paper." In the German mind German-Americans were spies and agents, in fact Germans, ready on call to betray their adopted country. To negotiate peace with a nation given over to a Kultur so horrible, leaving her able to spring at the world's throat again in pursuit of her devilish ambitions would be making play of war and a joke of its tragedies. Peace that can satisfy the needs of the time will be imposed on Germany by nations seeking to protect themselves against any possible repetition of the German crime. To stop short of such a peace would be criminal.

This War "Must Never Stop Till There Is No German Alive Who Believes It Is Right to Murder Peaceful Citizens, Rape Women and Crucify Children."

[Floyd W. Parsons in The Saturday Evening Post.]

The civilized world has stood aghast at the infamy of Germany. Nations have found it difficult to credit the stories of Hun atrocities. Science as represented by Teuton Kultur is now a refinement of all the arts of Satan. Why is this so? For an answer let us dismiss surmise and draw all our facts from that authoritative work—the War Book of the German General Staff. Here we have a volume that is a true child of Prussian military tradition. German morals and policies stand naked before us. We find that in the German mind peace is but a suspension of the state of war, instead of war's being a rude interruption of a state of peace.

Can an officer compel the peaceful inhabitants of an invaded country to give information about the strength and disposition of their nation's forces? No, say The Hague Regulations; but Yes, answers the German War Book, it is regrettable but necessary. Should they be exposed to the fire of their own troops? No, say the manuals of civilized nations; Yes, says the War Book, it may be indefensible, but its main justification is that it is successful. Should the forced labor of the inhabitants be limited to works that are not designed to injure their own country? Yes, say The Hague Regulations; No, this is an absurd distinction and impossible, says the German War Book.

This Teuton textbook for military officers continues to inform them as follows: Should prisoners of war be put to death? It is always ugly but sometimes expedient. May one hire an assassin, corrupt a citizen or incite an incendiary? Certainly; it may not be reputable and honor may fight shy of it, but the law of war is less touchy. Should the women and children, the old and the feeble, be allowed to depart before a bombardment begins? On the contrary, their presence is greatly to be desired—it makes the bombardment all the more effective, says the Hun.

But why multiply these examples of Prussian brutality? Let the reader who doubts, if there still be any such in this country, investigate and satisfy himself.

The War Book points out that "the errors which proceed from the spirit of benevolence in war are the worst."

• • • To introduce into the philosophy of war itself a principle of moderation would be an absurdity. • • • War is an act of violence which in its application knows no bounds. • • • Private property should always be respected; but if the necessity of war makes it advisable, every sequestration, every appropriation—temporary or permanent—every use, every injury and all destruction are permissible.

The War Book when it attempts to inculcate frightfulness is never obscure; when it advises forbearance it is always ambiguous. Through centuries, and amid difficulties, international law has progressed with the intent of humanizing the conduct of war. Honorable nations had come to believe that the sole object of war was to disable the armed forces of the enemy. But the German Staff refuses to countenance such a doctrine. It says: "We must seek just as much to smash the total intellectual [geistig] and material resources of the

enemy." The *Geist* of a people to the German means its innermost spirit and finest culture. So it is evident the Teuton warrior is specifically instructed to destroy not only the body, but the very soul of an enemy nation. This explains the definite German policy designed to humiliate and stupefy conquered peoples through wrecking not only material, but all spiritual resources.

If the Germans are not still red in tooth and claw, then why does their War Book ignore every decent practice that is based on voluntary morality, such as is accepted by all civilized nations. Perhaps this is the reason that the traveler in Germany finds that things which in our own country are left to the good sense and good breeding of the citizen are officially "verboten." It appears that the Hun is restrained only by fear. Under the caption Cunning and Deceit the Teuton manual instructs officers that "bribery, acceptance of offers of treachery, support of pretenders, and so on, are permissible." It adds further that "international law is in no way opposed to the exploitation of the crimes of third parties, such as assassination, incendiarism, robbery and the like." In this way the German presumes to believe that what is not expressly forbidden is thereby approved. He cannot understand that international law considers certain practices so repulsive that it will not, through legislation, admit the possibility of their existence.

I am sure the foregoing paragraphs make clear to the reader the fact that in the application of science to war the German General Staff will act without restraint. We may expect the Prussian to use every death-dealing force of Nature that comes under his control. He will not voluntarily carry on his fight within the limits of any roped arena, nor will he battle according to any set of Queensberry rules. The laws of nations are second to the needs of the Fatherland. Let the Teuton chemist discover a new gas that will penetrate our masks and sear the flesh from our bones, and he will turn it on us with a prayer that it prove doubly deadly.

We must dismiss our illusions and go forward with a determination never to stop until there is no German alive who believes it is right in either war or peace to murder peaceful citizens, rape women and crucify children.

Proper Punishment for Germany.

[Charlotte (N. C.) Observer.]

We would be entirely willing to leave the adjustment of Germany's liabilities for the war in the hands of Mr. Richard H. Edmonds of the MANUFACTURERS RECORD. Mr. Edmonds wants Germany to pay the cost of the war to the Allies, and he believes that would be a burden far less than the South had to shudder after the Civil War. He would compel Germany to repudiate her entire bonded issues and all currency issued to pay for the war. This, he argues, would put Germany in position to meet the enormous indemnities that must be imposed upon her, "and it would be a most successful way to punish the entire people for their part in the crime of trying to loot the world." It is within the probabilities that the Edmonds idea will have circulation around the conference table when the reckoning with Germany is being made up.

"God Grant That It May Come Soon."

[The Charlotte (N. C.) News.]

There is a matter upon which the public opinion of America must be formed within the coming months which is more vital than any other presented to their consideration since the signing of the Declaration of Independence. It is whether or not, after victory shall have crowned the arms of the Allies, the German Government is to be left in any sense intact—whether there is to be any name on the list of nations to represent the State against which the civilized portion of mankind with few exceptions is at present in arms.

Do you think that as to this question it might be well to catch one's rabbit before cooking it? There are more than 100,000,000 American citizens, and after our boys are on the Wilhelmstrasse it will be too late to do much forming of their opinions. They will already have been formed.

Talk is heard of Germany giving up Belgium and other ravished territory in return for the beginnings of a colonial empire which she had four years ago and which has passed under the control of the Allies.

The talk is sinister. It presupposes a Germany

after the war—a presumption which means that all the struggle, all the woe, all the blood that Germany has cost the world, will have been expended in vain.

Let Germany be defeated. Drive her out of Belgium, France, Russia, and any other territory you care to add to the list. Encircle her with bands of iron and take ever so many hostages for her good behavior and the great war, instead of having been a German defeat, will have been the first arduous round in the Hun's march to a domination of the world, more complete and infinitely more oppressive than the mightiest of Roman emperors enjoyed.

Consider that the Germans have been preparing for this attempt at world conquest for half a century. Leave them but the hope of renewing it at a future time under better auspices, and they will be very well content with the price of blood and tears their so-called defeat would have in that case have cost them.

Would you bind them with treaties? Treaties have less power to hold the Germans—on their own statement, reiterated from the days of Frederick to those of von Bethmann-Hollweg—than had the green withes with which the Philistines once strove to subdue and hold the terrible Samson.

Germany must emerge from the war a memory of shame and absolutely nothing more.

It is not necessary that this generation of her people pass from earth before this goal can be obtained, as it was necessary for the generation that Moses led out of Egypt to pass before the land of promise could be entered. The responsible statesmen, who will decide the issue when the war is over, have a number of alternatives open, any of which will serve to effect the purpose.

The question is will public opinion make them adopt such a course.

In the mass of public opinion that will have the final weight in the matter, that of America will have the most influence. How does America feel about the matter today, and what steps are being taken to make it feel, and feel deeply, on this matter against the day of decision?

Most of our people are too much absorbed—they cannot be blamed—with the tragedy coming so intimately into their lives to give much thought to what will take place thereafter. They do not realize that these later problems contain the germ of disaster; that unless they are determined judiciously, that very tragedy which so dims the eyes and occupies the thoughts of men and women today will have been in vain.

There must be an awakening to the importance of this matter, and that soon. God grant that it may come!

No Peace This Side of the Rhine and No Peace Without Punishment.

[Danbury (N. C.) Reporter.]

As the allied legions begin to converge on Berlin, listen out for a howl from the caged cougar, and listen for the echo from the thousands of spies, agents, "pacifists," "conscientious objectors," propagandists and other paid or fool sympathizers with the Hun.

But there must be no peace this side the Rhine. And when peace comes it must be a peace of justice and righteousness, and a peace of eternal retribution. The sacrifices which the American homes are making today, and which they shall continue to sustain until American armies shatter to pieces the Hun Prussia—these sacrifices must not, shall not be in vain. The terror, the despair, the agony inflicted upon civilization must never occur again. We could not afford to do our part in this terrible war for a less unselfish purpose than that the genius of war, made in Germany, should be destroyed, and that its makers should pay the sufferers as best they can for the damage wrought.

No newspaper, magazine or publication in America today has done so much or is doing so much for the cause of Americanism and Christian civilization as that bulwark of justice, righteousness and liberty, the MANUFACTURERS RECORD of Baltimore. Every week its matchless editorials scintillate with fire against the Hun menace. No other agency has done so much, in our opinion, to awaken the people of the United States to the stupendous menace of the Hun to American institutions, American existence. The MANUFACTURERS RECORD

stands for the unconditional and complete destruction of the Prussian military system, otherwise the situation is up to us to submit to the same fate. It is a terrible alternative. The American people are only just fully awakening to the realization that France and England have been dying for us, and but for the power of the British fleet, Hun submarines would not only have sunk the Lusitania, but would long since have blockaded every port in the United States, and Hun hordes have invaded our sacred shores.

Now that the allied armies, through the constantly arriving fresh strength from America, are turning the tables on the Hun, Germany has already begun her "peace offensive." It is so insidious you will scarcely know where the argument comes from, but let your ear be closed to the oily words of pro-Hun agents and spies and innocent fool propagandists and pacifists who would argue for peace now. Let there be no peace this side of the Rhine.

But when the murderous and raping hordes of the Kaiser have been destroyed, and the people of the German Empire have bound themselves in a bond to pay America for the colossal cost of this war through generations of taxation—as we should have to pay Germany half of our national wealth if we should lose the war—and when France and Italy have been given back their stolen territory, and Serbia and Belgium and Poland and Roumania restored, and England been paid the cost of her trouble and rewarded for her suffering—then let peace come. These are mild terms compared with those which the tiger would have inflicted on us if we had lost.

No Let-Up or Peace Until That Day.

[Sallisbury (N. C.) Evening Post.]

We must not let up until the American flag and the flags of our Allies fly over Berlin; there must be no peace until the dirty hounds who are responsible for this murder are hanged by the thousands.

This creed ought to be nailed at the head of all American newspapers; it should be emblazoned on the pulpits of all American churches; it should be adopted by the city and county ruling bodies in all sections of all American States; it should be painted over every school house door; it should be painted on every Allied ship that sails the seas; it should be flashed by electric light on millions of screens and bill-boards throughout civilization; it should be shouted from the platform by every speaker; it should be worn on the breast of every loyal man, woman and child in the civilized world; it should be reverently lisped by the whole human race at prayers.

Peace Talk Idle.

[The Knoxville (Tenn.) Sentinel.]

"It is difficult," the Stock Exchange Gazette of London comments on von Kuehlmann's suggestions of Germany's peace terms, to avoid the conclusion that the whole affair is no more than an effort to seat the military party more securely in the saddle, and is far from constituting any peace overture worthy of the name. If this be so, there is nothing for the Allies to do but to go on strenuously with the war. Peace on any such terms as has been indicated would be a surrender on their part of all for which they are fighting.

All talk of peace with Germany by negotiation now and henceforth is idle. Germany has wantonly and persistently perpetrated too many cruel and atrocious crimes to escape the punishment due her, and she will never be brought to a just and proper attitude until she shall have been beaten to her knees.

Punishment of the Criminals Essential.

[Winston-Salem (N. C.) Twin City Sentinel.]

The murderers in official position in Germany who started this horrible war must be punished in an adequate manner. That should be one of the first and foremost conditions of peace. These men are criminals in the sight of God and man, and they should not be allowed to escape punishment. In the discussion of disarmament problems and matters of territorial restoration and indemnity, this fact should not be overlooked.

Good German, Bad Prussian.

[By Richard Spillane in Commerce and Finance.]

Without being a jingo a person may hold opinion somewhat different from that expressed by President or former President. It is possible, too, without giving offense, to suggest that there may be political strategy in an American statesman or a French or British statesman pressing the point of distinction between Prussian and German for the influence it may have in widening any differences and promoting any feeling of doubt or suspicion there may be between the various parties within the German Empire.

Discussion should be profitable and illuminating. If there is a distinct line of demarcation between the Prussian and the German, we should recognize it and be guided by it in settling the war and the commercial and financial problems that grow out of the war and will have to be met after the war.

Nothing that has developed in the war has astounded the world more than the solidarity of the German people. The biggest single political party in the German Empire before the war was the Socialist. For years before 1914 the Socialists of Germany fraternized with the Socialists of France, Great Britain, Belgium and other countries. They proclaimed the brotherhood of men. They denounced nationalism. They declared that workmen must not recognize geographical lines set up by States. They expressed abhorrence of war, of the war machines and the sacrifices of human life that war entailed. And yet, at the first tap of the drum in July, 1914, they rushed to the colors and went forth to slay their fellows of Belgium, of France, of Britain and of Russia.

Were these men Prussians? Many, of course. But there are 28 States in the German Empire. Prussia is the largest, but there is no record that in any one of the other 27 there was opposition of any character to the creed of Domination or Downfall.

The world has been appalled by the atrocities of the German soldiers. Have the crucifixions, the rapings, the barbarities, the mutilations been confined to the Prussian troops? International law has been trampled under foot. Passenger ships, hospital ships, merchant vessels of neutrals and foes alike have been sunk without efforts to save the lives of non-combatants. The small boats to which the crews have taken refuge have been shelled by the U-boats. Have the assassins of the sea all been Prussians?

It is the testimony of the soldiers of the armies of the Allies that German troops surrendering and crying "Kamerad" act as screens for other Germans who throw bombs at the captors.

Bestialities, enslavements, horrors such as civilization was supposed to have ended, the German troops have rioted in. Were all the offenders Prussians? Has anyone heard a protest from the Germans of the 20-odd German States outside of Prussia?

If the German people were the peace-loving, kindly, generous souls we would like to believe them, it hardly is possible they would have participated so freely and joyed so fully in the saturnalia of slaughter for the last four years or have contributed for decades to the construction of the war machine to be turned loose on "Der Tag."

There are persons who never will accept the Good German, Bad Prussian notion. They may go so far as to agree that the Germans were not so brutish and savage until converted to Prussianism, but this might not be considered a concession, for a convert usually is more of a zealot than one long of the faith.

In the comparatively recent history of Germany you have the whole German program. The war on Denmark to get the coveted rich provinces of Schleswig-Holstein and open a route to the North Sea. The war on Austria-Hungary to make that empire a vassal of Germany. The war on France in 1870 to crush a hated foe and strip her of her richest States—States rich in mineral resources which Germany needed if she was to be great industrially. The world war for which Germany planned and prepared for more than 40 years and which Bernhardt confesses meant world conquest or downfall.

Is the German nation by the smashing of the Prussian militaristic machine to be cured of the mania for world domination which has possessed it for generations? Is the German in defeat to be trusted any more than the German prisoner crying "Kamerad" who shields one of his fellows, bomb in hand ready to hurl at

a trustful conqueror? Where does the line of Bad Prussian and Good German begin?

A beaten Germany will look with favor on distinction between a criminal and perfidious government (Prussian, of course) and a good but misguided people of Germany.

A beaten Germany will look with favor, too, in principle and in fact, on a peace basis of "no annexations and no indemnities." Why not?

Today in certain publications in America there is a subtle and studied playing on this "no annexations and no indemnities" note. There must be no retribution visited upon Germany to embitter the good German people and arouse a passion later for revenge. The wrongs committed in this war must be charged to the wicked autocracy. All else must be forgiven and forgotten.

Beautiful theory. Noble sentiment. Why not apply it to individuals? Why have prisons and electric chairs? Why not let burglars keep their loot and murderers go free rather than visit what we call justice upon them for their sins against society? Why embitter the feelings of the individual assassin or thief when to a nation laden with loot and with its hands red with blood we would give benediction and the charge "sin and sin no more?"

Let us reduce the whole matter to a simple statement. If Germany wins, it's a case of annexations and indemnities to Germany. If Germany loses, it's a case of annexations and no indemnities for the Allies.

Or to put it in another form, it is "heads" the Germans win and "tails" the Allies lose.

And still we wonder why all Germans, Prussians, Bavarians, etc., hold British, French, American and others in contempt.

War Industry in North Carolina

Raleigh, N. C., August 15—[Special.]—Something like 250 plants in North Carolina are doing war work for the government, covering a wide range. Among the products are: Cotton goods of many kinds, cottonseed oil, towels, piling treated with creosote or pyralin, blankets, lumber, boxes, box shooks, trunks, boxes, spruce timber for aeroplanes, aluminum, concrete ships, steel ships, wooden ships, shells for the army and navy, heavy army duck, overalls, wagon wheels, wagon hubs, sash cord, steel tanks, leather, cotton yarns, hose for the army, navy and marine corps, khaki cloth, shirts and drawers, airplane propellers of black walnut, outing flannel, hats, smoking tobacco, machinery, thread, moleskin, bed-lining, cross-arms and brackets for telegraph and telephone poles, furniture for offices at cantonments, etc. In the manufacture of these products for such special uses about 25,000 persons are employed. These war activities cover nearly all parts of the State.

The Carolina Packing Co. at Wilmington has an extensive trade in its meat products and is making sales in Baltimore and as far west as St. Louis. It has bought hogs as far south as Mississippi and as far west as Louisville, including Ohio-raised hogs. It buys hogs in this State, South Carolina, Georgia, Florida, Mississippi and Tennessee. During the summer cattle from the eastern part of this State have been handled and it is expected that many thousands will be shipped from the mountain region when cold weather comes. Mr. W. L. Love is the president of this company.

The Cape View Packing Co., G. Herbert Smith, president, will begin operations in September with a much larger capacity than the older plant. The new company is preparing for a great business. Its building is of concrete, steel and brick and is seven stories in height.

Outlook for Increased Rice Production in Louisiana.

New Orleans, August 15—[Special.]—In the river section and along the sugar district bayous rice harvesting now is in full swing. Some mills are starting and the rest are getting ready to start on a crop which will reach a total far in excess of last year's production. Rice was sold in Jennings, in the middle of the rice belt of Louisiana, Wednesday, which is 10 days earlier than ever before in the history of that section, and reports from the Southwest, where irrigation canals play a very prominent part in rice culture, are to the effect that the continued rains of last week have greatly improved the crop. Ideal rice-harvesting weather is the rule everywhere now. Gasoline harvesters are being generally used with considerable success.

Germany's Stolen Chemistry

IMPORTANT SCIENTIFIC DISCOVERIES AND INDUSTRIAL PROCESSES OF ALL NATIONS APPROPRIATED BY THE GERMANS.

[Dr. Townes R. Leigh, professor of chemistry in the Georgetown College, Georgetown, Ky., a leading Baptist educational institution, has made some remarkable contributions through the Manufacturers Record and other papers disproving Germany's claim to leadership in science and chemical inventions. In a recent article published in "The Drugs and Chemical Market" Dr. Leigh continues the discussion and he furnishes a copy of it to the Manufacturers Record for publication. Like all of his other contributions on the subject, it is intensely interesting. — Editor Manufacturers Record.]

By TOWNES R. LEIGH, Professor of Chemistry, Georgetown College.

When we recall that Samson slew a thousand Philistines with the jawbone of an ass we intuitively wonder how many he would have slain if armed with the jawbone of a German propagandist, according to whom all things were made by Germans and without them was not anything made that was made. To use a medical term, the modern Teuton seems to be suffering from what is known as paranoia, or the disease of an exaggerated ego. Yet, as much as the German has boasted, he has borrowed more; as much as he has talked, he has taken more.

In times of peace he has seized upon the inventions and discoveries of his neighbors for exploitation, shouting as he did so, "They are mine." When chemicals and drugs have been mentioned he has waxed especially boisterous, puffed up his breast and roared, "They are mine." Indeed, they are not his any more than are the Belgians whom he has deported to till his field and serve his forge. The first chemical works were established by Chaptal, near Montpellier, France. It is time to prick the inflated bubble of Germany's chemical reputation.

Fundamentals of Chemistry.

I have before me the leading text-book of general chemistry, the one taught in the foremost universities. Glancing down its index, my eye finally rests upon the word "Law," followed by a list containing 21 fundamental laws by which the science of chemistry is governed. There I see the names of Avogadro, Boyle, Charles, Dalton, Dulong and Petit, Faraday, Gay-Lussac, Henry, Le Chatelier, Mendelejeff, et cetera, down to van't Hoff—but nowhere do I see the name of a German. Italy, England, France, Russia and Holland flash forth in the glory of their sons wherever the principles of chemistry go; but Germany did not discover one of these secrets of general chemistry. Liebig and Wohler, who in the nineteenth century made important contributions to the branch of synthetic chemistry, received their training from the French. Germany, therefore, talks fast and furiously about the modern chemical industry and commerce with the hope that her clamor will cause the world to forget her debts. But, by the aid of Buckley's "History of Natural Sciences," we cannot forget that of the 30 chief men of science of the seventeenth century only three were of German blood, and of the 27 of the eighteenth century again only three were German. During the nineteenth century the science of chemistry made greater progress than it had made in all its past history. The majority of the most important contributions to chemistry during the past century were not made by Germans.

When we look over a catalogue of the chemical elements we are at once impressed with the very small number of useful ones discovered and first examined by Germans. Not a component of the air he breathes was discovered by a German. Oxygen is credited to Priestley, an Englishman, who late in life settled in Pennsylvania; nitrogen, first recognized by Rutherford, a professor in Edinburgh University; carbon dioxide, isolated by Black, a Scottish chemist and physicist; helium, krypton, xenon and neon, discovered and first studied by British subjects—Lockyer, Ramsay, Crookes and Rayleigh. Not an element in water was discovered by any German. Hydrogen was discovered by Cavendish, the noted English chemist, and oxygen, its other component, by Priestley, as we have already stated. Not an element in the salt with which we savor our food was discovered by any German. Its chlorine is a gift of that productive investigator, Scheele, a Swede; its sodium, from the versatile Davy of London. The indictment which has been brought against German chemists concerning the elements in air, water and salt

may be extended to cover the elements found in 75,000 other substances, including nearly all of the synthetic compounds used in the world's trade, to which we now wish to turn our attention.

Coal-Tar Dye Is English.

There is probably no other field in which synthetic chemistry has played so important a role as in the coal-tar dye industry. A brief review of some of the salient points in its development, including the synthesis of the first coal-tar color, proves conclusively that Great Britain is the original home of the coal-tar dye.

In 1739 Dr. Clayton, dean of Kildare, first distilled coal and obtained coke, tar and gas. Less than 50 years later the Earl of Dundonald, a Scottish nobleman, obtained a patent for the extraction of coal-tar in commercial quantities. In 1792 William Murdock of England first used coal gas as illuminant. Naphthalene, used chiefly in the manufacture of indigo, was discovered in 1820 by Garden; benzol, the parent substance of the most important dyes, was discovered in illuminating gas in 1815 by Faraday; anthracene, largely used in the synthesis of Turkey-red, was first procured by Dumas of France; toluene, used both for making dyes and the powerful explosive T. N. T., was first obtained by Mansfield, and picric acid, also employed in the manufacture of dyes and explosives, was first prepared by Peter Woulfe, a London chemist.

In connection with these achievements, the importance of the miner's safety lamp, invented in 1815 by Sir Humphrey Davy, must not be overlooked, for by the use of that simple and ingenious device the danger and hazard of mining coal were largely removed.

The great honor of producing the first coal-tar color belongs to W. H. Perkin, an English chemist, who, during the Easter vacation of 1856, tried out some experiments in which he was intensely interested. He planned to produce synthetically no less a substance than the valuable alkaloid, quinine. The attempt was a failure in so far as obtaining quinine was concerned, but he noticed that a colored product had been formed. The most interesting feature of his work was the quick perception he had of some possible value of the new substance. The dye was finally purified and given the name mauve, by which it became familiar. For 50 years it was used in printing the English penny postage stamp, by which means England maintained an unique memorial to her celebrated chemist, perpetuated even in the remotest part of the world, wherever her mail service may have penetrated.

Not long after his first great discovery, Perkin perfected a method of manufacturing alizarin, with the result that the extraction of that dye from madder has been practically abandoned and the enormous acreage formerly devoted to the cultivation of that plant has been given over to cereals and other crops. Thus the laboratory for the first time in history became a successful competitor with the land.

Other French and English Discoveries.

After the synthesis of mauveine by Perkin, the synthetic dye industry grew by leaps and bounds. Frequently methods for the preparation of the same dye were discovered independently by different chemists, and a common dye was often sold under different names. For example, Verquin, a French chemist, manufactured fuchsin, and this same dye became known as magenta and rosaniline.

In 1863 an Englishman by the name of Lightfoot produced aniline black, and in 1873 the first sulphur dye was discovered by Croissant and Brittoniere of France. In connection with the development of dyestuffs, it should be recorded that to a French chemist is due the

modern method of the preparation of the excellent bright-yellow dye for animal fibers. Another quality which this dye possesses is that it may be used for the detection of hemp, flax and cotton in woolen goods, inasmuch as it does not color vegetable fibers.

The American Dye Industry.

Germany has exploited, but did not discover, coal-tar dyes. In 1913 she exported about 12 times as much synthetic color as was manufactured in the United States. Since the outbreak of the war American chemists and manufacturers have made far greater progress in the production of dyes than was ever made in Germany in the same length of time.

It may be that America is destined to control the dye industry. At the present time a very large percentage of all the known coal-tar colors is being made in America, and already there is an investment of \$200,000,000 for the production of colors and intermediates. American dyes have established their prestige in foreign markets, and in this respect the future holds an auspicious promise. The total domestic production of aniline dyes in 1915 was valued at \$2,470,000. Our exports for the fiscal year 1917 of aniline and natural dyes were \$11,710,887, an amount greater than the value of all the synthetic organic chemicals, including coal-tar dyes, imported annually into the United States before the war. Our total export of dyestuffs for the last calendar year amounted to upward of \$15,000,000.

It is not a strange or abnormal situation that we have been behind Germany in the manufacture of dyestuffs. In this country we have had new mines to exploit, new fields to cultivate and many industries of more immediate importance to claim the full attention of our men of enterprise and scientific training. According to Dr. Leo H. Baekeland, who has carefully investigated the subject, the chewing-gum industry of the United States exceeded by several millions of dollars the value of all synthetic chemicals, dyestuffs included, imported every year into the United States. One single chain of five and ten cent stores in 1913 exceeded by \$11,000,000 the whole of the German synthetic dye industry throughout the world. In the same year the entire German color industry paid \$11,000,000 in dividends, while one American company with a single standardized product—the Ford motor car—did a greater annual business than all the German coal-tar dye plants together, with their 1200 different products, and earned four times their combined dividends while paying three times their wages.

As far as the mineral chemical industries are concerned, America, even before the war, could stand excellent comparison with Germany or any other country. In fact, when it came to the production of acids and heavy chemicals, we in many branches were decidedly ahead of Germany. Especially was this true of our important electro-chemical industries, which were developed far ahead of those of any other country.

Explosives.

The manufacture of synthetic dyes is only one of the many ideas that Germany borrowed from her more resourceful neighbors. The very chemicals which she uses to prosecute her war were not first produced by the subjects of the Kaiser. Howard, an English chemist, first made the fulminate of mercury; Schoenbein of Basel, Switzerland, gun cotton in 1845; Sobrero of Turin, Italy, nitro-glycerine in 1846; Alfred Nobel of Sweden, dynamite in 1856 and blasting gelatine in 1878; Veille of France, military smokeless powder in 1886; Sir Alfred Abel of England, cordite; Egg, likewise an Englishman, devised the percussion cap; Picford, his compatriot, the safety fuse, in 1831, and it was Venvenuto Cellini, an Italian, who introduced the blending process in gunpowder. Chlorine gas and a dozen other chemicals of modern warfare were not first "Made in Germany." And finally, we have it on the authority of Charles E. Munroe, a specialist on explosives, that out of 62 names of experts on explosives two stand out supreme—that of Abel of England and that of Bertholet of France.

Fixation of Nitrogen.

Though Germans may say much about the fixation of nitrogen, what credit do they deserve for its development? As long ago as 1784 the English chemist, Cavendish, observed that when electric sparks are passed through air the oxides of nitrogen are formed and by absorbing these oxides in water or in alkalies nitric acid or nitrates could be produced. However, his discovery lay dormant until the demand for nitrates increased to such a degree that it became evident that

the natural deposits of these substances were in danger of being exhausted before many years.

In 1898, Sir William Crookes, president of the British Association, delivered the solemn warning that the years of plenty were quickly passing and before long the greatly increased intensive cultivation would use up all the known sources of combined nitrogen and there would be no Egypt from whose granaries supplies could be obtained. Commercial chemistry was rapidly increasing its demands for nitrogen compounds in the manufacturing of dyes, explosives, ice, soda and cyanides, the last being used in the extraction of gold from its ores and in the plating of metals, yet the source of supply of native nitrates showed no such elasticity. The Englishman's warning caused chemists and manufacturers to turn their attention to that important field. The first to solve successfully the problem of the combination of atmospheric nitrogen on a commercial scale were two Norwegians, Bidkeland and Eyde. Other methods for the fixation of nitrogen commercially have since been developed. Our Government is now spending millions of dollars in the construction of nitrate plants which are destined to place us in the forefront among the nations of the world in this particular field.

Important Processes.

Few of the valuable chemical processes were developed by German brains. The Leblanc method of making soda-ash directly from salt was devised by a Frenchman in behalf of his country and named in his honor. The Solvay method, now more generally used, was perfected by a Belgian and bears his name. Soda-ash is employed in the manufacture of glass, soap and many chemical reagents, and the enormous quantity of 2,250,000 tons is produced annually.

The soda process for making paper from wood pulp was patented by Watt and Burgess of America. The sulphite process for the production of paper pulp from wood and the method of decomposition of fats by steam at high temperature, largely used in the manufacture of soap, were the work of another American, R. A. Tilghman. The cyanide process of obtaining gold and silver was conceived by our fellow-countrymen, McArthur and Forest. The process of obtaining aluminum cheap was devised by C. M. Hall, also an American, while Cowles of Cleveland produced aluminum bronze. The process of making carborundum and graphite in commercial quantities was the work of E. G. Acheson. The French and the Americans were the first to manufacture ice by the use of liquid ammonia.

The process of the softening of water was worked out by Dr. Clark of Aberdeen, Scotland. The filtration of water for public use was first carried out by James Simpson of Chelsea Waterworks, London, England. The decolorizing power of vegetable charcoal was first noticed by Lowitz of St. Petersburg, and that of animal charcoal, the basis of the modern refinery, by Figuier of Montpellier, France. The process of hardening fats by the use of hydrogen we owe chiefly to an English firm, Messrs. Crossfield & Son. By their process whale oil is now converted by large amounts into solid material suitable for the manufacturing of soap. The important contact process which is largely used in the manufacture of sulphuric acid has been developed upon the observation made as far back as 1831 by P. Phillips, a vinegar merchant of Bristol, that the oxidation of sulphur dioxide is greatly accelerated by the presence of platinum. The Englishman, John Mercer, taught us to mercerize cotton. The Frenchman, Chardonnet, the process of making artificial silk. The method, however, by which most of the imitation or artificial silk is made at the present time is the viscose process, invented by the English chemists, Crass and Bevan, in which wood pulp is used. H. Mege of France gave us oleomargarine; malted and condensed milks are distinctively American-born and developed products. Hyatt of America gave to the world celluloid.

To M. Verneuil of Paris we are indebted for the artificial ruby, the real ruby of science, which is as much the ruby of Ceylon and Burmah as is the water formed by burning hydrogen the water of the rain—identical in property and composition. In a small factory in the Rue Lafayette is to be found the commercial production of rubies on so cheap a scale as to decree the doom of the ruby mine, a doom as certain as that decreed by the synthetic dye to the indigo industry of India. To Henri Moissan of the Sorbonne, who produced tiny artificial diamonds, belongs the honor of the art and practice of electro-metallurgy, for, while other men have done things before and after his work, he

made 300 contributions of new substances in the electro-metallurgical field. In the ever-widening circle of factories that surround Niagara Falls are to be found the greatest high-temperature industries in the world.

Very different from the dye, explosives and other synthetic products just described is the remarkable substance produced by the American chemist, L. W. Baeckeland, and which has quickly acquired a great industrial value. This substance, called Baeckelite, is synthesized from phenol and formaldehyde; it is infusible, insoluble, an excellent substitute for amber, the best of insulators for electricity, and, though more durable than celluloid, it is not inflammable and is less expensive.

Every Effort Being Made to Increase Basic Production in Birmingham District.

Birmingham, Ala., August 19—[Special.]—Pig iron producers are bending every effort in this section for a larger production but there is not so much being accomplished. Fuel, labor and other causes are still mentioned. It is learned that orders for not less than 50,000 tons of iron, delivery during the first half of the coming year, had to be declined by Southern manufacturers for the reason that the government needs must first be protected. In addition to the big order for 100,000 tons of basic iron allocated to this district, being worked on by the Alabama Company, the Sloss-Sheffield Steel & Iron Company and the Woodward Iron Company, an order for 1000 tons of basic iron to be shipped to Italy has just been accepted by the Sloss-Sheffield Company, sent here by the government. There has been further reduction of iron on yards here, in fact the statistics show as lean yards as have been noticed in the past two years and longer. It is estimated that there are 110,000 tons of iron in the yards here, of which 55,000 tons is basic iron, belonging to the Tennessee Coal, Iron & Railroad Company, and will be needed when the increased operations in the steel mills start, within the next few weeks. Inquiries have been numerous for iron for first half of 1919 delivery. While some selling occurred it can hardly total a month's supply at the most, from what can be heard. There are delays noted on the old contracts still pending for pig iron. All indications point to the August output at furnaces being but little larger than that of July, if any at all.

Railroad car service for the handling of pig iron and steel has shown continued improvement in the Birmingham section. There is not so much delay when shipments were urgent. When it comes time for the moving of the big order of basic iron for the British government, on which the Alabama company will turn out around 19,000 tons, the Sloss-Sheffield Company upwards of 38,000 and the Woodward Iron Company around 40,000 tons, there will be steady supply of cars.

Operations at the foundries and machine shops in the Birmingham district are to the limit still. There is a better condition as to labor in this section now than heretofore. While the agreement arrived at by cotton gin manufacturers and the priority commission of the war industries board at Washington to the effect that there will be no further gins built this year in order to save iron and steel will be more or less felt in this section no drastic interruption to general operations here will result. Two factories producing cotton gins are located in Birmingham proper while machine shops and foundries here have been doing a large amount of cotton gin repairing for some time.

The coal production in Alabama will show a slight increase, it is believed, for the week ending August 17 over the previous week, when the output at mines was given at 427,718 tons. The maximum week's production was for the week ending July 27, when 433,738 tons of coal were reported. Investigations are to be made in this district as to operators bidding for one another's labor and offering inducements for change of positions. Judge H. C. Sellheimer, manager of production in this State and also the arbiter for controversies between operators and employees of mines, states that in his opinion a loss of 1,000,000 tons is caused annually by the shifting of labor and he is assisting in the investigations to stop the constant moving about of employees of mines in this State. Railroad car shortage was felt week before last but effort is being made to supply the mines with all the cars they can possibly load, with maximum production sought. Development on a large scale is assured for the coal fields during the latter part of this year and the first half of 1919.

The scrap iron and steel market has taken a turn

for the better, there is some selling and stocks are again being replenished. Quotations have taken on more strength and even local consumers are showing a little willingness to pay a dollar or two more per ton for the products they need. Dealers in scrap here are looking forward for some business from northern and eastern centers, communications having been numerous lately concerning old material. All indications now point to a steady business and scrap dealers are laying plans to keep a full supply, to meet any and all demands. Local consumers are bidding for large tonnages, offering a little more than they have been paying for moderate sized contracts.

Quotations on pig iron and scrap iron and steel in the South are as follows:

PIG-IRON.

No. 2 foundry..... \$33.50 f. o. b. furnace
Basic iron, \$32.00; Government revision will be announced again by September 1; differentials in grades of iron below Government regulations as to prices went into effect.

OLD MATERIAL.

Old steel axes.....	\$3.00 to \$4.00
Old steel rails.....	2.00 to 2.50
Heavy melting steel.....	2.00 to 2.50
No. 1 railroad wrought.....	2.00 to 2.50
No. 1 cast.....	2.00 to 2.50
Stove plate.....	2.00 to 2.50
Old car wheels.....	2.00 to 2.50
Old tramcar wheels.....	2.00 to 2.50
Machine shop turnings.....	1.00 to 1.50
Cast-iron borings.....	1.00 to 1.50

Decrease in Coal Production for Fourth Consecutive Week.

The production of bituminous coal during the week of August 10 decreased 278,000 net tons or 2.2 per cent., according to the weekly report of the Geological Survey, and recorded the fourth successive week of decreased output. The decrease in production during this period was equivalent to 1,000,000 net tons or 7.3 per cent. below the record week of July 13, when production reached 13,286,000 net tons, and makes necessary an output of 14,500,000 net tons during the balance of the summer months to make up the deficit for the coal year to date.

The output during the week of August 10 (including lignite and coal coked) is estimated at 12,274,000 net tons as against 12,552,000 net tons during the week of August 3 and 10,636,000 net tons during the current week of 1917. The average production per working day during the week of August 10 is estimated at 2,046,000 net tons as compared with 2,092,000 net tons during the week preceding and 1,773,000 net tons during the week of August 10, 1917. The daily average during the current week fell 54,000 net tons or 2.6 per cent. behind the daily summer requirements established by the U. S. Fuel Administration. These requirements are as follows:

AVERAGE DAILY REQUIREMENTS ESTABLISHED BY THE UNITED STATES FUEL ADMINISTRATION.

Summer months—April 1 to September 30.....	2,300
Winter months—October 1 to March 31.....	1,900
Coal year—April 1, 1918, to March 31, 1919.....	2,000

Shipments during the past week decreased from all districts with exception of Southwest Virginia, Alabama and the district including Illinois, Indiana and Western Kentucky. The increase from Southwest Virginia amounted to 24.3 per cent., from Alabama 11.1 per cent. and from Illinois, Indiana and Western Kentucky 2.2 per cent.

The production of beehive coke in the United States during the week ended August 10 is estimated at 92,000 net tons, a decrease compared with the week preceding of 12,000 net tons or less than 2%. The average production per working day is estimated at 100,000 net tons as against 102,000 net tons during the week ended August 3.

Operating conditions in the by-product coke industry improved slightly during the week ended August 3, the plants operating 91.5 per cent. of their present capacity as compared with 90.6 per cent. during the week preceding.

Material gains occurred during the week in Kentucky, Maryland, Minnesota, New York and Ohio. Improvement was brought about in Kentucky and Maryland by repaired plants, in Minnesota by better market conditions and in New York by better labor conditions.

Tennessee was the one State reporting a decrease in production.

The week of August 3 was the first time the operators of the country reported a market for all coke produced, the operators in Minnesota, the lone State reporting loss of time due to that factor during the past few months, finding a market for their entire production.

BIG CANNON PLANT IN FRANCE.

\$25,000,000 or More to Be Spent by the United States for Relining Guns.

The United States Ordnance Department has approved plans for machine-tool equipment to be installed in France for relining heavy cannon from 8 to 16 inches diameter and up to 50 calibers in length, which guns are mounted on railway trucks. To maintain accuracy they have to be relined from time to time, and the installation of this relining plant abroad will call for an expenditure of from \$25,000,000 to \$30,000,000, according to official figures. The machine tools alone will cost from \$15,000,000 to \$20,000,000, and they will include gun-boring lathes, engine lathes, rifling machines, grinders, etc., about 218 units altogether.

Among the facilities required for manufacturing these tools was a planer 500 feet long, costing \$450,000. It is officially stated that the largest planer previously built was but 186 feet long. Reinforced concrete is used for the bed plates of this planer, this being an economy of metal, and also presenting advantages with regard to temperature changes.

There will be shrinkage pits for the removal and replacement of liners, an equipment of 240-ton traveling cranes, a steam-electric generating plant of about 5000 kilowatts capacity, with boilers, pumps and other accessories, besides electric motors for driving machinery.

Extensive housing facilities will also be necessary. It is further stated that the Ordnance Department completed the engineering work on this entire project, reviewed and approved it within 30 days, and that in the same time it was passed by the Clearance Committee of the War Industries Board, negotiations were concluded with machine-tool builders, and procurement orders were issued for making the tools, which will be delivered very shortly.

A Fine Group of Cotton Mills

"A Tale of Five Cities" is a large and handsome book illustrative and descriptive of the West Point group of cotton mills. It is issued by the West Point Manufacturing Co., West Point, Ga., that being the location of the general offices, although the mills are respectively located at Lanett, Shawmut, Langdale, Fairfax and Riverview, Ala., these places being in Chambers County, adjoining the Georgia boundary opposite West Point. The main feature of the volume is a finely colored group picture of the several mills printed on a folder four pages in size. Then there are on sundry other pages illustrations of the industrial, educational and social life of the mill towns and villages, wholesome and progressive throughout.

The purpose of the book is to familiarize those who are financially and otherwise interested in these enterprises with some of the more important facts concerning them and also to afford insight into the living conditions and general environment of those who are employed. That it does this work admirably is evident at a glance. It also says that a consistent policy of replacement has always been pursued, and as a consequence the physical condition of the various plants is of the highest order, resulting in efficiency and maximum production. The buildings are all well ventilated, heated and lighted. Sanitary conditions are recognized as being of prime importance and have been carefully looked after. A substantial amount of insurance upon the life of each employee on the payrolls has also been provided. The book is printed in the highest style of the art preservative and its binding is substantial and attractive. A full-page colored picture is on the front cover. Joshua B. Richmond of Boston is president of the West Point Manufacturing Co. and George H. Lanier of West Point is vice-president and general manager. Horace S. Sears of Boston is treasurer.

Laclede Explosive Shell Factory.

Referring to its plans for manufacturing explosive shells, the Laclede Gas Light Co., munitions department, St. Louis, advises the MANUFACTURERS RECORD: "Installation for manufacturing 155 mm. shells, Broadway plant, calls for buildings to cost \$750,000; building proposals opened August 21; mill construction; install hydraulic presses for shell forgings, turning lathes for machining shells, etc.; installation for manufacturing 240 mm. shells. Manchester plant provides for buildings to cost \$600,000; mill construction; building prop-

osals, date not determined; place lathe equipment for machining shells. Construction in charge of J. A. V. Scheckenbach, superintendent of construction."

Plan for Government Electric Power Plants.

Washington, D. C., August 20—[Special.]—Electrical power from great plants controlled by the Government in industrial centers will be the means of increasing production in war industries, shipyards and munition factories if a bill introduced by Representative Sims of Tennessee at the first session of Congress after the summer recess becomes a law. This measure is in no way to replace the water-power bill which he has sponsored and which is now before the House, but it is purely an emergency plan to meet the urgent need for power in industrially congested districts. It carries an appropriation of \$200,000,000 for construction, acquisition, maintenance and operation of power plants, and it authorizes the President to order the construction of such plants where immediate need exists, or to take over privately-owned power plants, increasing their capacity or requiring the owners to place all or a part of their power at the Government's disposal.

While the bill would immediately affect the districts adjacent to Pittsburgh, Philadelphia and other Eastern cities where large war contracts are being fulfilled, it will apply to any community engaged in war industries whose productiveness is hampered by lack of power, and it is inevitable that with the growth of industry in the South the expansion of plants to take on war contracts and the resultant demand for greater power that Southern cities will also become the sites for some of these plants to generate current.

Mr. Sims declared that the nation faces a power shortage, for some time acute, and now hampering war production. The matter was gone over thoroughly with representatives of the great power companies of the country, with economists and engineers, and their endorsement as well as that of the President and Chairman Baruch of the War Industries Board was obtained. The greatest power need at present exists in munition factories and shipyards.

Not only will a more widespread use of electrical current speed up the war plants, but it will greatly reduce the consumption of coal and release tonnage for other freight over the congested railroads. More coal must also be released for producing metallurgical coke, toluol and ammoniacal liquor. If the schedule which the Fuel Administration has declared essential to build up the coal reserves (14,500,000 tons of coal per week for the rest of the summer) cannot be maintained, the coal needs for winter can be met only through economy. This, it is claimed, the Sims power bill is designed to produce.

It is even claimed that with electrical current produced at the Government power plants it will be possible to electrify the railroads in congested districts.

No New Cotton Gins to Be Built.

Washington, D. C., August 20—[Special.]—Despite their plea for preferential treatment for supplies of iron, steel and fuel, the manufacturers of cotton gins, who recently presented their claims at a meeting with the Priorities Commissioner and other representatives of the War Industries Board, were unsuccessful in securing the action they desired. The board recognized the necessity for new equipment and for spare and repair parts to maintain existing plants, but it was decided that, by strong appeals to cotton ginners, existing plants can be repaired to last until after the war. It was also decided that there is no need to increase the number of ginning plants, even for an abnormally large crop, because the existing plants are not working at capacity. An agreement was reached under which manufacturers of cotton gins will substantially curtail their production during the current year in order to conserve iron and steel and to release labor for other war industries.

For \$2,500,000 Expenditure.

The Monongahela Valley Traction Co., Fairmont, W. Va., plans a \$2,500,000 loan and wires the MANUFACTURERS RECORD that the amount is for the following: Complete work under way, including Rivesville power plant; gas-producer plant; gasoline plant; drilling gas wells; laying gas mains; paving; extending transmission lines; developing coal land; sinking two shafts for mines; building 25 houses.

\$48,000,000 FOR SOUTHERN PORTS.

Big Government Expenditures Progressing at Norfolk, Charleston and New Orleans.

Washington, D. C., August 20—[Special.]—About \$48,000,000 will be expended by the War Department for construction, now progressing, in three Southern seaports of storage warehouses, wharves, docks and other work to facilitate handling material for the army. Minor construction of the same sort has been accomplished at Newport News, Little Rock, Baltimore, Americus, San Antonio and Richmond, Va. The total expenditure throughout the United States will be \$218,000,000.

The Southern ports chiefly benefited are New Orleans, Charleston and Norfolk. At New Orleans the new port terminal is described as follows: Three warehouses 140x600 feet, floor space, each building, 504,000 square feet; available storage space at 80 per cent., 1,200,000 square feet; construction, reinforced concrete on wooden-pile foundation; each building served by six eight-ton elevators; wharves, 140x2000 feet; floor space, both floors 560,000 feet; available for storage, 300,000 square feet; served by six eight-ton elevators; construction, structural steel frame on wooden piles, timber floors, 12-inch brick firewalls every 200 feet; steel rolling doors. The warehouse is connected with the main warehouse by a bridge at the second-story level, passing overhead all railroad yards between wharf shed and warehouses. The railroad has 8.46 miles of tracks. This project just begun, and to be completed by November 1; estimated cost, \$20,000,000.

At Charleston the quartermaster terminal in progress is thus described: Length of dock, 3580 linear feet; type of construction, timber; six warehouses, with total area 1,152,000 square feet; two open sheds, with total area 380,800 square feet; headhouse, 264,000 square feet; railroad tracks serving, nine; depth and width of channel, 35x800 feet; railroad yards serving, 800 cars capacity. This work begun June 1, and will probably be completed December 1; estimated cost \$11,550,000.

New quartermaster terminal at Norfolk includes following: Pier 1, area 412,200 square feet; building one story, with area of 290,000 square feet; type of construction, brick and tile firewalls and granite side walls; railroad tracks, seven; pier 2, area 412,200 square feet; building, two stories; type of construction same as No. 1; railroad tracks, five; channel, 35 feet deep, 450 feet between piers and slips, 350 feet wide on each side; warehouses eight, with total area 2,016,000 square feet; tracks serving, 13; railroad yard serving, 1000 cars capacity. Work at Norfolk started February 1 and will be finished by December 1; estimated cost, \$16,438,000.

All of these improvements are supervised by the Construction Division of the Army. The majority of the projects will be completed before the end of the year. With few exceptions they are permanent structures of concrete, brick and steel.

Stabilization of Oil Prices and Supply.

Washington, D. C., August 20—[Special.]—The stabilization of oil prices and a continuous supply of crude oil in usual channels is believed to have been secured by the Director-General of the Oil Division of the Fuel Administration as a result of the recent conferences held at Tulsa, Okla., and Houston, Tex. It has been agreed that producers and refiners will name committees to adjust local disputes, and if a decision cannot be reached they will refer the case to the National Petroleum War Service Committee, or, if necessary, an appeal can be made to the Fuel Administration.

The plan provides generally for maximum premiums to be paid for oil in the various fields throughout the United States, and, so far as possible, arranges its flow in existing channels and assures protection as to price and supplies for small refiners. The Fuel Administration is also endeavoring to have established fair differentials for refiners and distributors, but as far as possible it is planned to leave questions of premiums and diversion of crude oil to the voluntary agreement of the industry itself.

It is believed that the plans outlined will assure the producer satisfactory oil prices, the refiner ample protection against competitors with larger capital, and that as a result there will be no radical change in the consumers' prices of gasoline and other oil products.

The Oil Industry and Its Relation to War

PRACTICAL PATRIOTISM PUT TO THE TEST.

A meeting was recently held in Oklahoma attended by oil producers and refiners and representatives of the Government, including M. L. Requa, head of the Oil Division, and A. C. Bedford, chairman of the Petroleum War Service Committee. Some extracts from the addresses of Mr. Requa and Mr. Bedford, as reported by the Oil and Gas Journal, are of special interest far beyond the confines of the oil trade.

Extracts from Mr. Requa's Address.

Your Oklahoma papers have in all seriousness asked "Why?" have stated that the producers and refiners of oil in Oklahoma wanted to be let alone; that they cannot understand why Government control or supervision of the industry should be necessary, nor who will benefit by the stabilization of prices.

All through the newspaper comment there has sounded that one dominant note, which indicates to me an utter failure to grasp the problem of petroleum as related to this war.

In order that you may realize exactly what I have in mind, it is my purpose to explain somewhat in detail this problem as it presents itself to me. I take it that it is needless to go into any explanation of the vital necessity for petroleum products in winning this war. This war cannot be won without the products of petroleum. And I can conceive of no prouder position in the ranks of our national defense than that occupied by this great industry which supplies the lubricants for the machinery of our national industrial life; the fuel for our great battleships, and for our fleets of airships—which latter, I believe, in the last analysis, will be the deciding factor in our victory.

We are confronted by conditions never paralleled in the history of the world. We fight in defense of our firesides, our traditions, our freedom, our civilization. We have demand for more than we can supply. All steel is restricted to the requirements of war, and at present and for months to come there will be no surplus left for other uses. Innumerable industries are under restraint, and the manufacturers allowed to operate only for the actual needs of the United States Government. The price of copper has been fixed, as has the price of aluminum, zinc and many other products, and the business men of the nation have shown the most magnificent spirit of co-operation under the program of curtailment and regulation, notwithstanding the fact that it has in many cases meant heavy financial loss.

Is the oil industry unique, or exempt. Does it seek for itself the right to go unchallenged and uncontrolled? I confess that that is not my conception of the spirit of the industry. The proposal that I am making is that stabilized differentials be created as between crude petroleum and finished products at the refinery and as between refinery prices and the price to the ultimate consumer; that these differentials be maintained and move in unison with the price of crude; that if necessary the volume of business be frozen and new business equitably distributed; that the old theory of competition give way for the war period to a condition of mutual helpfulness in behalf of national welfare, and that all these things be brought about by the voluntary action of the industry in harmonious co-operation with the Fuel Administration.

I am aware that in all proposals such as these, which radically alter customs of long standing, we are bound to encounter more or less temporary friction during the period of readjustment. The citizen who fails to realize that we are in a period of acute stress and trial and strife has but a small conception of the times. If we are to discharge our duty as citizens of this nation we must be prepared to meet conditions such as these as they arise; refusing to worry or to lose our tempers; recognizing that it is our duty to work each with the other, so that maximum effort may be forthcoming with the minimum of disturbance.

There is nothing unfair and there is nothing unjust in a request such as is made upon the oil industry by the Fuel Administration. The producers of oil, the refiners and the marketers are trustees on behalf of the nation, and they cannot shirk the responsibility that comes with that trusteeship, nor can that trust be righteously administered at this time save in the national interest.

The problem of petroleum is not a domestic problem,

but is one which vitally concerns not only the welfare of our American soldiers and sailors, but the welfare of the Allies also. So instead of a national problem only, we are confronted by an international problem that concerns the petroleum supplies of the world—the delivery to England, France and Italy of the largest part of their needs for petroleum products—and I am perfectly sure that when the history of these times shall have been written there will be no brighter page than the one which tells of the triumphant success of your industry in meeting every call made upon it for its different products and of its having so governed itself as to deserve the highest praise for its patriotic devotion and demonstrated ability to rule itself wisely and conservatively—a triumphant vindication of the principles of democracy.

We are engaged in a great war. We have joined with other nations in defending the cause of human liberty and freedom. The representatives of the people—the Congress of the United States—has passed war measures for the purpose of national defense. The times demand stern discipline; powers have been conferred that may be justified only on the plea of national safety. Among those acts is the so-called Lever bill, giving the President authority over foods, feeds and fuels, including oil; so far-reaching in effect that I question whether many of you here present fully realize the power and the authority vested in the President, who, in turn, has authorized Mr. Garfield to act for him in the administration of the bill so far as coal and oil are concerned.

I realize that it is not possible for the producers of oil or the refiners of oil in Oklahoma to be fully acquainted with the many problems confronting official Washington. The magnitude of the struggle in which we are engaged is, I think, but faintly comprehended even by many of those who occupy official positions. The most profound students of military tactics in Europe failed at the outset of this war to visualize in any degree the gigantic proportions that the conflict has assumed and it is recorded that after the Battle of the Marne the German general staff, realizing how utterly they had misjudged the course of events or the immensity of the undertaking, deliberately set to work to construct an entirely new theory for the conduct of future warfare.

And if those men could not previsualize the task, how can you men of Oklahoma, far removed from the strife, gain any real comprehension of the titanic struggle in which this nation is involved? And it is because of the inexpressible extent of conflict; because it is a life-and-death grapple between autocracy on the one hand and democracy on the other that it behooves us to leave unfulfilled no endeavor that will make for victory; and this without the possibility of compromise; with the certainty of untold sacrifice, even unto the death of those we love best, and in full knowledge that we must pay the price; but sustained by the serene conviction that out of all the chaos and warfare shall rise, clear-shining and triumphant, the abiding glory of liberty and freedom for all mankind.

From Maine to California, from the Canadian border to the Mexican boundary, this nation is a great armed camp wherein the business of war has superseded and relegated to secondary place the industrial pursuits of peace. We live, in fact, today with but one object in view—all else is of really little moment. We stand as one great unified nation, with the patriotic fire burning as fiercely and steadily in the breasts of those whose homes look out upon the great Pacific as in the hearts of those who have been cradled in the shadow of Bunker Hill or those whose first lesson in patriotism was taught within sight of the walls of the Alamo. There is for us but one duty, one object in life today, one paramount obligation that as citizens of this great democracy we must of necessity discharge—and from every State in the Union goes up the same shout, which rolling into one great diapason, strikes terror into the heart of the autocracies of Europe. That cry is the cry of "Victory," full-throated and unafraid, from the lips of free men, giving courage to the Allies to endure yet a little longer, and binding our own souls in

unison of purpose such as has never before characterized this nation.

Do you not, can you not, realize that a normal state of affairs is no longer existent; that the old yardstick with which we have been wont to measure has been smashed to splinters, and that we must for the time being surrender ourselves to the new regime and construct for ourselves a new standard of measurement?

You will be hopelessly at sea if you do not realize all of this; if you do not approach this problem from an entirely new point of view; if you do not see that the greatest triumph of democracy is the ability of a free people to surrender temporarily their individual initiative and subject themselves to rigid discipline en masse, to the end that they may achieve victory, following which they may again return to their accustomed method of individualism which has been the glory and the backbone and the upbuilding force of this nation. And if we are so to subject ourselves, if many of us are to pay the supreme price, if our daily lives are to be utterly altered, if the current of our national life is to be suddenly transformed into a raging torrent rushing madly and tempestuously onward, shall we not demand as recompense complete and unconditional victory? And if we thus so highly resolve, shall we not at the same time agree that the old rule of business competition is suspended, that we are our brother's keeper, that we may not indulge in domestic dissension in the face of this great international conflict—in which our own stake is equal to that of the Allies?

You men may no more choose your own path in these days than may the soldier in France or the sailor on the high seas. You are obligated to do your part quite as solemnly as they; and that obligation can only be fulfilled by the most perfect, complete and harmonious unison of action. We may not have civil war, in the form of unrestricted competition, at a time when we are fighting a great war on foreign soil.

Let us here highly resolve that when the final word is written, it shall be said of those great souls who barred the way in Belgium, who sacrificed their lives from Louvain to the Marne, "They shall not have died in vain!"

Extracts from Mr. Bedford's Address.

At this very hour, gentlemen, when we are gathered here, two vast armies are locked in death grips on the fields of France. On the one side are gathered the forces of barbarism, who have assembled and magnified all the ideas of cruelty and horrors of past ages. On the other side are amassed the forces of liberty and honor and righteousness defending the principles of civilization that have been adopted throughout the ages. "The past and the present," as our President has truly said, "are in deadly grapple, and there can be but one issue. The settlement must be final."

Just at this moment the German forces are at their maximum strength. They are fighting desperately, for, as the Kaiser truly realizes, it is now or never with himself and German autocracy. Opposed to these forces are the British, French, Belgians, the Italians, the Greeks and our own gallant soldiers. They all realize the crisis; they know, as our President has said, "the day has come to conquer or submit." Our own men and our Allies have made a valiant stand and the time has come when, if not only the soldiers, but if we business men here at home play our part, the tide of battle must surely turn.

It is a critical moment, gentlemen. Now for the first time our soldiers are striking the German at full force beside the soldiers of France. Their eagerness is our eagerness, their determination is our determination, their confidence is our confidence. No matter how fierce the struggle, and it will be fierce because Germany is desperate, there can be but one outcome, and we have the utmost trust in the Allied armies and their magnificent leader. Their courage will not falter, and in the hearts of all the nations behind them is the same courage and ultimate victory is certain. "We shall make good with our lives and our fortunes the great faith to which we were born." But the verdict that is to be decided on the fields of France depends as much upon us men here in America as it does upon our men over there. You realize just as keenly as I do how big a factor industry is in fighting this war. You know just as thoroughly as I do how important a part it plays in the machinery of war, and I wish to express the glowing satisfaction and enthusiasm I feel over the

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spontaneous, whole-hearted manner in which the oil men of the country have responded to the national call. I mean not only in pledging their business, but in offering their men for the front line trenches. The men and money of the oil industry have put their heart and soul behind the President in this fight.

The oil men already have shown that they realize their national duty. What is true of them is true of the rest of the country. As the golden stars marking fallen heroes begin more and more to glisten in our service flags, so the people of the nation are coming more and more to realize not only the grim tragedy of this war, but also to appreciate the fact that they must stand as a unit behind our brave boys. So, too, they are understanding more keenly than ever that this is a conflict that must be waged, not alone by an army of men in uniform, but by an army that comprises every man, woman and child at home. As President Wilson has well said in his Proclamation to the American people, April 15, 1918: "It is evident to every thinking man that our industries, on the farms, in the shipyards, in the mines, in the factories, must be made more prolific and more efficient than ever and that they must be more economically managed and better adapted to the peculiar requirements of our task than they have been; and, what I want to say is that the men and women who devote their thought and energy to these things will be serving the country and conducting the fight for peace and freedom just as truly and just as effectively as the men on the battlefields or in the trenches." The entire business and workaday world must be in uniform, so to speak, and every thought and every act in our business hours and in our homes must be devoted to the winning of the war. The great fields of production, of finance, of commerce are being gathered together as a part of this vast economic army to support our armed forces at the front. We must have in these fields the same qualities of efficiency and co-ordination which we recognize as indispensable to the success of armies in war.

The oil industry already has proved that it realizes that it is a battalion in this vast economic army. It has shown that it is ready to yield to the nation's call what in peace times it considered the sacred right of competition, and no man should hold back from cordial co-operation both in the letter and in the spirit of what the industry as a whole feels is its duty.

To forecast the effect of this great war, in which our country is now engaged, is certainly beyond the power of the ordinary human. That it will involve many and perhaps radical changes, especially in an industry such as the petroleum industry, is a certainty. There may be many changes in the future before us, possibly as much for our good as to our disadvantage, but at least one thing has come to pass that I am sure you will all agree with me is for our good. Is it not a cause for congratulation that in these times, in the midst of a world war that has almost destroyed our faith in humanity and that has witnessed so much of terrible cruelty and ruthlessness, that in such a time as this the petroleum industry for the first time in its history has come together in a new-found unity, based primarily upon love of country and a loyalty to the principles to which we and our allies are pledged for the progress and freedom of mankind?

The investigation was most comprehensive. It went into not only the needs of the American Government, but the needs of our Allies, Great Britain, France and Italy, and considered the demands of the war factories, so vital to the prosecution of the war, the supply for agricultural purposes and the consumption by automobiles. It went still further. The committee looked ahead, not one year, but two years. It considered plans for the upbuilding of our army and navy, the increase of the coast patrol, of submarine chasers, and of the airplane fleet, and that great mercantile navy so rapidly coming into being, many of whose ships will be oil burners. It gave heed to the fueling of ships, to the demands of motor-truck service at the front. As a specific instance of how critical this service is at times, we read in the dispatches from France that at the battle of Chateau Thierry a complete surprise was effected through bringing up to the front cannon and horses by motor trucks, some of the motor trucks carrying six and eight horses each, all within the brief space of 24 hours. It considered the fact that Great Britain alone had 400,000 motor lorries behind the battle line, to say nothing of what America, France and Italy would have for supplying their troops. Furthermore,

the committee gave heed to the necessity of supplying more and more factories with fuel, and to the rapid growth of the automobile industry.

The Committee of the Council of National defense, which afterwards became the National Petroleum War Service Committee, sought to be forehanded, for the German had already taught us, sadly, the value of foresight and preparedness. The committee, like the Food Commission, like the representatives of the steel industry, and of other lines of industry, looked into the future. It weighed the probable demands with the output. The Food Commission, after the harvests of last year, estimated that there would be a shortage of 25,000,000 bushels of wheat before the coming harvest, and insisted upon most stringent economy in order to save wheat for our fighting men. The Oil Committee, looking into the future, could not see how, except with the most rigid economy, the war and peace demands could be met. It urged economy in the use of oil products, and made suggestions to the users of automobiles as to how best to conserve the gasoline supply. This warning was grave and emphatic. The Oil Committee did a second thing. It appealed to the producers of oil to dig deeper into the earth in order to increase the supply of crude. It called upon refining companies to enlarge or change their existing plants and refining methods to meet the special demands for fuel oil.

The spirit of the oil industry has also been the spirit of sacrifice, but the best we may do in this direction seems paltry when we set it against the smallest of the sacrifices of our kith and kin, the stories of which are now coming to us daily from the Marne, but when we compare them with our practical and perhaps somewhat selfish attitude in the days when the only war we knew about was business competition, we see in ourselves the leavening process which began with the sacrifices made by our boys. To each of you will occur some instance of the disability under which the industry has labored by reason of the war, and while I have always admitted to having a high opinion of my own company, I can scarcely imagine in pre-war days submitting with equanimity to all the various vicissitudes which have beset it since. One by one it has watched its ships being swept from the ocean, victims of the U-boat, and I have yet to hear one word of regret except expressions of sorrow and sympathy for the merchant sailors of these boats whom the German commanders would not let live.

In helping to work out this problem and in the consideration that you may give it, may I ask that you do it in the spirit which has enrolled this industry as a part of the great industrial army at home, and which shall merit the confidence referred to by President Wilson, who in all his utterances has voiced a deep and sincere faith in the business and industrial leaders of the nation. He has done so in a manner that has keyed their patriotism to the highest pitch, and has stirred them to exert all their physical, mental and moral qualities in support of the cause of liberty and honor.

Tax on All Unused Ground Suggested.

WM. J. RIVERS, Secretary and Treasurer Seaford Engineering Co., Philadelphia.

Referring to your Daily Bulletin of August 12 and the editorial on the front page concerning "Crop Production Not Equal to Needs of Our Nation and of Our Allies." The writer believes it would be a great benefit to the nation if the Government would pass a law putting a special tax on all unused ground. Even steeper than Canada now has. There are thousands upon thousands of acres of ground that could be used if the owners would only let the people use it and not charge too high a rental. If the owners had to pay a special tax for not using this ground they would be glad to have some one use it to escape this special tax.

Near the writer's house there is a plot of ground which would make a fine garden, but when I requested of the owner the privilege of using this ground in conjunction with some of my neighbors as a war garden, he wanted us to pay the taxes and give him 50 per cent. of what we produced; and this ground is still lying vacant.

There are in this city a great many vacant lots which are not used which would provide vegetables for one or more families, and if this had a special tax they would be given over to some one else to use if the owners could not use them and would prevent the hoarding of more ground than the owner could use, and if he was holding it for some future benefit he would be glad to have some one use it until such time as he needed it so he would not have to pay the special tax.

The Relation of Platinum to the War.

When the chemists clamor for more platinum and the Bureau of Mines says we are starving for platinum and the person who wears a platinum-set jewel is branded as a slacker the layman naturally sits up and asks, "What's all the talk about platinum? What is it used for?" And the answer is, "sulphuric acid," says Mr. J. J. Willeman, a prominent member of the Minnesota section of the American Chemical Society.

Now, platinum is a many-sided metal. It is not corroded in moist air; it is not oxidized by electric sparks. Hence it is used in contact points in many electrical instruments, as telephones, telegraphs, radios, signal instruments on shipboard, etc. It is not affected by most chemicals or by high temperatures; therefore it is used in certain parts of big guns, in chemical analyses, in electric furnaces. It is very costly, therefore it is in demand for jewelry by persons who do not know for what else to spend their money.

But all of these uses are overshadowed at the present time by its use in the manufacture of sulphuric acid. Platinum is absolutely essential in making sulphuric acid, and sulphuric acid is absolutely essential in making high explosives, textiles, war gases, dyes, many foods and medicines; in fact, hardly a substance can be named in the manufacture of which sulphuric acid does not have to deal directly or indirectly. The late Robert Kennedy Duncan, founder of the system of fellowships in industrial chemistry at the University of Pittsburgh, speaks of it as "sulphuric acid, oil of vitriol, the king of chemical products."

Very recently a French authority in commenting on this chemical said: "If called upon to decide which of all the manufactured products, the industrial creations, has been the most necessary and useful to the country since the war, without which defeat would have been rapid and inevitable, I should answer without hesitation sulphuric acid. The factor which best represents the economic prosperity of a nation is its consumption of sulphuric acid. True in time of peace, it is still more so in modern warfare."

What does this king of chemicals do in the process of making explosives? The chemist says it is a dehydrating agent. That is, it has a tremendous affinity for water. It will abstract water from the air; it will take water from anything with which it comes in contact. If water is not to be had already formed, it will take from some available source the elements which go to make up water and combine them. It is this latter act which is utilized in explosives manufacture. Glycerin and nitric acid are rather harmless after they are mixed. But if sulphuric acid is added to the mixture it will immediately take an atom of hydrogen and one of oxygen from the nitric acid, and an atom of hydrogen from the glycerin, combine them into water and then take the water unto itself. This leaves the nitric acid chemically united with the glycerin and we have nitroglycerin. Similarly we have nitrocellulose or gun cotton and trinitrotoluene, the famous T. N. T. of the present war.

Sulphuric acid is made from air, water and the fumes of burning sulphur. These are all cheap, common materials, but they won't unite without strenuous provocation, ordinarily. Platinum furnishes a mild provocation; the mere presence of a trace of it causes the oxygen, water and sulphur dioxide to join hands chemically and the king of chemicals is born. At the present time in the United States more than 500,000 tons a month is being made.

Highways Industries Association.

At a meeting of the officers and directors of the Highway Industries Association at Lima, Ohio, recently plans were considered for the annual meeting and for a joint convention with the American Association of State Highway Officials, besides other important matters. It was decided to change the time of the annual meeting from the first week in October to the first week in December, so that it will begin December 2 and last until December 6 inclusive. As tentatively proposed the first two days will be for an executive meeting of State highway officials, the joint convention will be held on the next two days, while on the last day all work then unfinished will be completed. The program and particulars of arrangements will soon be announced. The officials of the Highway Industries Association are Prest., S. M. Williams of Lima, O.; Vice Prests., A. R. Hirst of Madison, Wis., 1st.; E. J. Mehren of New York, 2nd.; S. T. Henry of Washington, D. C., 3rd.; Secretary, H. G. Shirley, also of Washington, where the headquarters are at 302 Maryland Building.

Mississippi as Typical of South's Great Strides in Diversification.

Jackson, Miss., August 16—[Special.]—Mississippi's progress in diversification, as told in figures recently gathered in this State for the State Council for Defense, is remarkable, and is ample evidence of the forward movement the entire South is making in the direction of feeding itself.

Ten years ago Mississippi was a cotton-producing State, with a stock farm almost as much of a rarity as an elephant ranch would be today.

Today, Mississippi is a producer of hundreds of tons of food and feed, in the forefront of the hog-producing Commonwealths, the owner of some of the finest herds of beef cattle in the world, the possessor of 23 thriving creameries and magnificent dairy herds, of flour mills, of a large packing plant, of canneries whose products are sold in all parts of the nation.

A decade ago a pure-bred hog was a curiosity. Today, there are in the State several international grand champions, and at three recent sales of Duroc Jerseys Log buyers from every one of the Middle Western States came to Mississippi to get choice breeding stuff, and they paid the prices for them. The average for two of the sales per head was more than \$300, and a single individual sold at Jackson brought \$580.

A carload of hogs to one of the bigger markets causes no more comment today than a bale of cotton. On the contrary, it is necessary for a county to ship five carloads or more at a time to get any mention. The first result has been that business, which used to have an open season from September 15 to February 15, now runs 12 months in the year and does not go into a vacation period when all the cotton money is exhausted.

This does not mean the cotton crop has been neglected. Last season's crop was perhaps the most valuable ever grown in the State, and this year's promises to be equally as worth while. But where the great cotton plantations of the Delta once raised cotton and bought everything else, they now produce their own foodstuffs, and in many instances raise their own wheat and make every ounce of the flour used by their employees.

What is true of hogs is also true of cattle and to a lesser degree of sheep. The sheep industry is on the upward trend today, and once more flocks of the wool producers dot the hillsides and adorn the flat lands of the great Delta.

The figures of the State Council, furnished by Mr. C. A. Cobb, assistant State agent for farm demonstration work, do not even cover a decade. They merely take in the years between 1909 and 1917. They show, first of all, that in that time there has been a total increase in farm products of 217 per cent.

Wheat production has increased 1800 per cent, and velvet bean production 79,800 per cent. The year 1909 was chosen as a starting point because it was in that year that farm demonstration work came to Mississippi, and from it properly dates the new era in Mississippi farming.

In 1909, Mississippi produced 28,429,000 bushels of corn; in 1917, 84,050,000, an increase of 195 per cent. Wheat increased from 11,000,000 bushels in 1909 to 21,000,000 in 1917; oats from 2,400,000 in 1909 to 5,700,000 in 1917; potatoes from 783,000 in 1909 to 1,092,000 in 1917; sweet potatoes from 590,000 in 1909 to 5,525,000 in 1917.

The increase in the velvet-bean crop represents one of the greatest strides forward the State has ever made in diversified farming. This legume had barely got a foothold in the State in 1909, a scant 15,000 bushels being produced. In 1917 the records show that 120,000 bushels were produced, and this year the yield will be even larger.

Soy beans have gone from 5000 bushels in 1909 to 120,000 in 1917, a development that rivals the spread of velvet-bean culture. Before the advent of these useful legumes the cowpea was widely planted, but its place has almost been entirely taken by the two newcomers, which have proved immensely valuable from every standpoint.

Dairy cattle and milk show an increase from 330,000 tons in 1909 to 508,000 in 1917, and other cattle from 577,000 tons in 1909 to 644,000 in 1917. Hogs have increased from 1,290,000 to 1,920,000, and sheep from 171,000 to 174,000.

In point of money value, the increase has been no less remarkable. In 1909 the value of the farm products of the State was placed at \$177,745,266, including \$61,200,000 worth of cotton, while the value of last

year's crops, counting cotton at \$101,750,000, totaled \$361,699,000, an increase of \$243,953,734 for the eight-year period.

This year, the increase in dairy cattle and creamery products, in beef cattle, in hogs, in wheat, in velvet and soy beans, in sheep will be no less remarkable. Corn and oats may not show up so well, because of untoward seasons, but the farmers planted them. And they will keep on planting them, because they are becoming just as "set" for diversification as they once were for the "all-cotton" plan.

And while all this has been going on, the State has built hundreds of miles of good roads, established a system of rural education that has no superiors even in the famous Middle West, built up thriving communities, and fast-growing small cities, and has sent thousands of her stalwart sons to France as well.

Destructive Activities Charged Against Pro-Germans in South.

C. T. MARSHALL, Route 3, Tampa, Fla.

Herewith \$5, which please place to my credit on subscription account.

I am trying to raise truck and a few hogs and chickens, but everything in the feed and fertilizer line and also labor is so high that there is not much profit at best in any of these.

I raised one car of cabbage last spring and sent it to Philadelphia. The net returns, \$114.19, almost paid for the crates and the one extra laborer. So I gave the people some greens without losing anything but my expenses up to the time of cutting and loading. I think I know what was the matter with my profits, and if you will give a remedy you will not only give me a great amount of satisfaction, but will be doing, I think, a wonderful work on winning the war.

I iced my car and it went through in good time, but got to the market in bad order. That never happened until this year, and nearly every car shipped got the same dose. One of my neighbors, the largest trucker in West Florida, sent three cars three days earlier than mine. He received \$96.47 for his three cars. What was the trouble? Simply they were not properly iced in transit. It could not have been accidentally passed when they were so many, but it was purposely done by pro-Germans. In that way the truckers are discouraged so that they will hardly plant enough to furnish the early market and the North will get a damaged lot of stuff hardly fit for human feed.

Unless you can get some way to kill that bunch of pro-Germans up this line it will be useless to produce spring vegetables in this section to go East, which is our market. Unless the pro-Germans are killed, at least enough of them to scare the rest, there is no safety in any kind of business. But how are the truckers in the South going to reach the men that ruin their truck in transit? The records would show that everything is O. K. I know this without looking.

The MANUFACTURERS RECORD has taken up many fights for others. Can you help in this, as I don't know how to start? Not only is the shipping delayed, the ammunition plants blown up, trains wrecked and hundreds of other depredations, but the farmers and truckers have their troubles. One of my neighbors had his crop of castor beans ruined by having his fence cut. He thinks he knows that a pro did it, but he can't prove it, and not knowing which particular one, he can't shoot six or eight, at least he don't do it, but the Government won't get these castor beans that they so badly need, and that is what the President wants.

The banks should have taken time by the forelock and got their money out of the whiskey men in time, as you point out that they should, and not be a hollering for some one or the Government to pay (donate) them the money they have lost.

The feeling here against any pro-German or suspected pro is very bitter, and much more so than any feeling against whiskey; besides, whiskey has many friends that will do anything possible to defend it, while the pro is hated by everyone, from the little prattling babe to the eldest man, and the women seem to be more bitter than the men.

I think it would be a good time for you to write a good strong letter to the bankers to get out from under while it is yet possible.

Dispatches from Texas state that the Houston Oil Co. has brought in another big oil well near Big Hill, Liberty county, Texas, the daily flow being 3000 barrels.

Important Books on West Virginia Geology.

Two important and interesting publications have just been issued by the West Virginia Geological Survey, Morgantown, W. Va. One of them, No. 28, is a detailed report on Barbour and Upshur counties, including the western part of Randolph county, by D. H. Reger, with an introductory discussion of deep-seated records in the oil fields, including the deepest well in the world, by I. C. White, and a discussion of deep-seated temperatures by C. E. Van Arstrand; the other, No. 31, is a revised figure showing bituminous coal beds in West Virginia. The first is a book of 867 pages, illustrated with 53 half-tones and 43 figures, accompanied by a separate case of topographic and geologic maps of the entire area in two sheets, one for Barbour county, the other for Upshur county and the western part of Randolph county. The whole region is underlain by coal measures, including several very valuable beds, all of which are described. The second publication includes a zincograph section or cut 6 inches wide and 40 inches long showing the names, number and intervals separating the coal beds of the State on the scale of 1 inch to 200 feet, compiled and revised by Ray V. Hennen. The terms on which these publications may be obtained can be learned on application to the survey.

Trying to Finance Corpus Christi Seawall.

Corpus Christi, Tex., August 14—[Special.]—Mayor Roy Miller is in Dallas for a conference with the Texas Division of the Capital Issues Committee in reference to the proposed sale of \$600,000 Corpus Christi seawall bonds.

The city has an offer for the bonds at par and accrued interest, whereby \$250,000 will be paid to the city on delivery of the bonds and the remaining \$350,000 will be invested in Liberty bonds or other Government certificates.

If the approval of the committee is secured, the City Council contemplates an early beginning of construction on the Corpus Christi seawall. If this approval is not forthcoming, then it is most likely that the city will be unable to take any further steps in the project until after the war.

At the last regular session of the Legislature a bill was passed ceding to the city for a period of 15 years the ad valorem taxes of Nueces county for paying interest charges and creating a sinking fund for bonds voted for such a seawall. The issuance of the bonds was authorized in an election last January.

Large Expansion of Guayule Rubber Industry Expected.

Mexico, August 14—[Special.]—Several of the plants in the Torreon district for the manufacture of crude rubber from the wild guayule shrub have been placed in operation recently after a long shut-down. According to figures of border custom officials there was exported from Mexico to the United States during the six months ending August 1, crude guayule rubber to the value of approximately \$1,250,000, of which 1,256,999 pounds, valued at \$882,785 gold, were exported through the Eagle Pass gateway.

Plans are on foot for a big revival of the guayule rubber industry in this country and besides the resumption of the factories already in existence a number of new plants will be built. The demand for guayule rubber for the manufacture of automobile tires is constantly growing, it is stated.

How One Postal Card Was Delayed in Delivery.

ALBERT A. POLLARD, Moss Point, Miss.

In a large office building a letter was seen lodged at the seventh floor. The mail chute was opened, and the cause of the letter lodging was found to be a postal card bearing date three years earlier and lodged between top and bottom of the floor by corner caught between the frame and the glass of the chute front. This explains one mystery of delayed mail. It does not, however, explain the delay and subsequent delivery of several pieces which you some time lately told of receiving at your office.

Planning \$2,100,000 Improvements.

The Potomac Electric Power Co., Washington, D. C. plans to issue \$2,100,000 bonds for extension and improvements to its electric generating and transmitting facilities.

The Government Warns Against Fake Letters in Interest of Germany

[Special Correspondence Manufacturers Record.]

Washington, D. C., August 19.

Knowledge of the utter unreliability of any information coming out of Germany, where it has passed through German hands, should be patent to the peoples of all nations. The thorough unscrupulousness of the enemy in this respect extends to every possible limit. That the object is not only to withhold knowledge as to the real state of affairs in every respect, but also to weaken, wherever possible, the moral as well as the physical stamina of the Allies, is equally obvious.

Not a little interest attaches, therefore, to an official statement issued by the Committee on Public Information regarding the value to be ascribed to any letters which may be received in this country from the American prisoners of war in German prison camps. As indicative of the Hun methods, this statement deserves to be carefully considered in connection with the sickly sentimentality evinced in certain types of letters which have received publicity in certain books on war matters, of which excellent samples appeared in Miss Madeline Dwyer's excerpts from letters supposed to have been written to a German mother by an English aviation officer, and her touching reply thereto. That letters of such character, even if written, which may well be doubted, bear the cynical imprimatur of the beast is made palpably evident through the warning which has just been issued to American editors to exercise unusual care in publishing any letters purporting to give accounts of the treatments accorded the American soldiers in the German prisons. The warning, in full, as issued by the Committee on Public Information, is as follows:

"Col. Churchill, Chief of the Military Intelligence Branch of the General Staff, directs the attention of American editors to recently published letters from American prisoners of war in German camps, in which the prisoners speak of the excellence of the food and general treatment of the prisoners.

"An officer of the Military Intelligence Branch, who spent two years of the war in Germany, reports that there are certain rules laid down for all prisoners in letter-writing. The price they pay for the transmission of their letters is that they must state that they are contented. The letters of the prisoners are carefully censored at the camp, and any statements made contrary to the rules laid down for letter-writing simply means destruction of the letter.

"It is, therefore, concluded that any information coming from American prisoners in Germany is absolutely unreliable and should not be published in American newspapers or magazines as in any way authentic.

"It is urged that all editors give the above very earnest consideration in handling prisoners' letters that may reach them in any way whatever."

This official warning can scarcely have any other effect than to put the patriotic newspapers of the country on fresh guard. Those which fail to observe the hint may well be suspicioned of ulterior motives. It is refreshing to know that in many parts of the country the public agencies for the dissemination of information have put up the bars against pro-German propaganda. Inquiry at the Public Library in Washington divulges the fact that German books have been removed from the shelves. But perhaps the most cheering instance that has come to the attention of the writer is a sign conspicuously displayed in the Cincinnati Public Library. It hangs in the lobby, where it can be seen by all, and reads substantially as follows:

"Any patron of this library finding any pacifist or pro-German sentiment in any newspaper, magazine or book in this library will please report the same to the librarian."

This, for a great city which numbers among its population so many of German ancestry, speaks in the most vigorous and inspiring tones for its unqualified patriotism. The words hit every visitor "between the eyes," strengthen the morale of every true citizen, and correspondingly weaken the power of insidious suggestion, however subtly it may be disguised. A similar sign, couched in equally straightforward and unmistakable language, posted in every public library of every city or town of the nation, would prove to be a moral force of inestimable value.

floors in the basement, which have tar and concrete sub-floors, with wood surfaces. All wainscoting is of Alabama marble, as are the stairways, making the building practically fireproof.

The furnishings of all offices are of steel, grained to represent mahogany, and are being manufactured by the Art Metal Construction Co. of Jamestown, N. Y.

The building was designed by Walker & Chase of Atlanta, while Donaldson & Pearson of the same city are the general contractors. R. J. Freeman, Commissioner of Roads and Revenues, has charge of the work, assisted by an advisory committee composed of O. O. Ray, J. M. Estes, D. O. Neal, A. J. Almond, C. C. Childers and Steve McCurdy.

An accompanying illustration presents a view of the structure, which will cost, complete with furnishings, about \$110,000.

Commendations, Kicks, Comments

A Wish for France and Belgium.

J. W. DUNN, Secretary Electra Chamber of Commerce, Electra, Tex.—The MANUFACTURERS RECORD is every bit as essential as the best daily papers in the country. We would not forego the careful perusal of either, especially during the critical period of this fight for freedom. Your magnificent stand on every phase of the question exhibits clean-cut decision on the right side where there is a possible chance of error. And the absolutely fearless manner in which you handle insidious pro-German propaganda gives the world an exhibition of pure Americanism that must prove invaluable not only to the MANUFACTURERS RECORD, but also to the whole American nation. You are feeding the people meat instead of sop. The time is here now when they should be fed with meat, and fed it raw. There is a time for loving and a time for hating; a time for living and a time for dying. This is the open season for Germans. I hope our brave boys will richly fertilize the fields of France and Belgium with those bloody swash-bucklers, so that France and Belgium may find nourishment for their bodies from the reincarnation of a rotten nation, in the shape of a glorious golden wheat crop.

Our "War Prattle Is Bunk," Says This Writer.

JOHN G. DAVIS, 509 West Adams St., Jacksonville, Fla.—Kindly accept thanks for courtesy extended in the list of names you sent me, and also the sample copy of your paper.

After the war is over I may subscribe to your paper, because at the present time (judging from the August 1 copy) there are many things on which you prattle about the war which, in my opinion, are mere bunk. Our present duty is to win the war and not argue over our different ideas. So I am putting that \$6.50 in W. S. S. and have nothing more to say, but after the war is over you will hear many a different tune than is being played now.

However, here's hoping that they find victory when every partner in the Allied cause will have reason to be proud of their boys, men and women, and a peace that will hold may not be very far off, but just far enough that we shall all learn the vital lessons it teaches.

Nothing but Victory.

For Christianity and Humanity.

C. H. BANKS, Champion Supply Co., Atlanta, Ga.—The writer hardly knows how to express our full appreciation of the great work you are doing in the interest of the Allies, Christianity and humanity. While no doubt you do not receive many hundreds of letters more from your subscribers, we believe they are heart and soul with you in your great work and undertaking for mankind.

We are giving your article of July 20, "On to Berlin," conspicuous space of full page in Sunday's Constitution, of which we will have electrolyte made to print copies for distribution throughout America.

Again please let us state that you are doing the greatest work of any man in America, outside the President, for the sake of justice, right and humanity.

Slow to Awaken.

A. M. CHREITZBERG, President First National Bank, Spartanburg, S. C.—Please send us by return mail two complete series of front-cover editorials, MANUFACTURERS RECORD War Eagle Series, also 100 copies "Germany, the Super-Fliend." I wish you would have some copies of a letter of a Baltimore chaplain in France printed, signed by George Alexander Griffith.

The superlative good work that your editor is doing is worthy of the noblest fighters on earth. I wish his words could be burned indelibly upon the mind and soul of every American intelligent enough to know the difference between black and white. Our people are slowly awakening, but oh, it is so slow in the inland districts.

Return of an Old Friend.

W. H. ADAMS, Mining Engineer and Metallurgist, Mineral, Va.—Herewith my check to cover the coming year's issues of the MANUFACTURERS RECORD, and have no doubt I shall find them as deeply interesting and instructive, as well as educational, as always in the past years. My name was on your subscription lists as early as 1887, and so remained for years until my professional duties carried me in the Pacific coast regions, and since that early date I have noted with great interest and pleasure the advances you have made year by year. May your efforts never grow less in well-doing for the country and for the South.

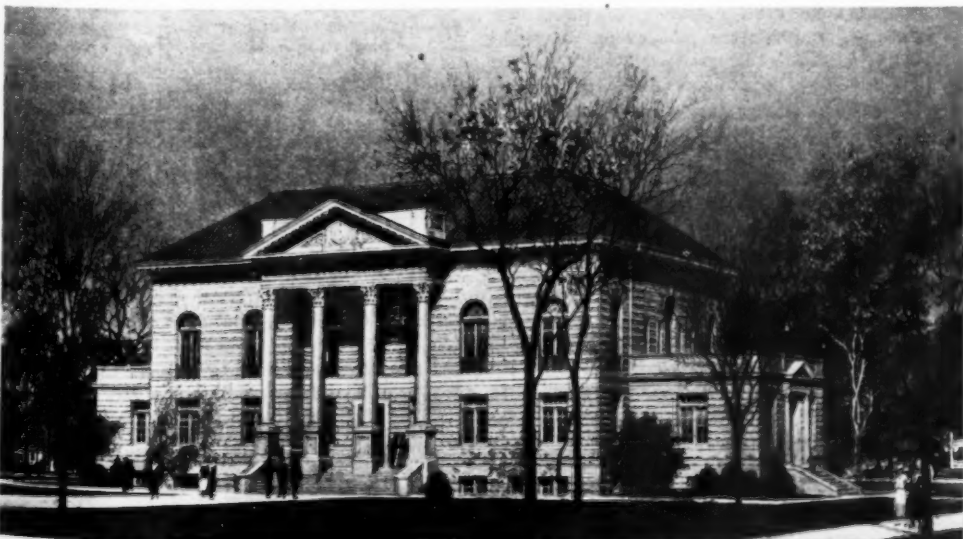
As Viewed by an English Subscriber.

R. A. FLETCHER, London, England.— * * * I only wish we had a similar paper in this country and one that is so outspoken on the subject of the war, but I suppose the whole conditions of the two countries are so different that it is unlikely such a paper as the MANUFACTURERS RECORD could be published here. It is a splendid paper, and I wish it every success.

A Most Welcome Birthday Gift.

W. R. PEETE, Chicago, Ill.—I take pleasure in saying that my subscription to your magazine was given to me by my wife as a birthday present, as she had heard me express my regret at receiving your recent letter to my company notifying us that advertisers were entitled to only one copy, and I am frank to say that she could not have selected a more welcome birthday gift.

I have been reading your magazine for years, as my father, George A. Peete, was manager for 30-odd years, prior to 1900, of the Gullett-Gin Co., Amite City, La.



DE KALB COUNTY'S \$110,000 COURTHOUSE.

ANOTHER SHIPYARD FOR NEW ORLEANS

Government to Build \$1,250,000 Dry Dock Plant for 10,000-Ton Vessels.

Further shipbuilding facilities needed at New Orleans will be provided in a \$1,250,000 plant which the Emergency Fleet Corporation will build at a cost of \$1,250,000. They will include a dry dock capable of handling 10,000-ton vessels and built in sections for use independently or as one unit, docking the largest ships entering the port of New Orleans.

Announcement of the new shipyard was made through W. P. Nelson, district agent in charge of concrete and wood steamship construction at New Orleans. A water-front site has been secured for the new plant, which, when completed, will employ 400 men in the repair of ships and of entirely building vessels when necessary. Plans and specifications are being prepared with a view of beginning the necessary improvements by September 1 and having the new dry dock ready for use by January 1.

Contracts for Southern Shipyards.

Government contracts awarded last week for 33 standard cargo carriers (3500-ton wooden steamships), seven 2500-ton wooden barges and three wooden tugs, included 25 vessels to be built in Southern shipyards. Eighteen 3500-ton wooden ships and two 2500-ton wooden barges will be built by the Universal Shipbuilding Co. of Houston, and five 2500-ton wooden barges will be built by the Coastwise Shipbuilding Co. of Baltimore.

Brittain Shipbuilding Co.

Capitalized at \$1,000,000, the Brittain Shipbuilding Co. of Jacksonville has been incorporated with these officers: E. T. Terry, Prest.; S. L. Waller, Vice-Prest.; J. W. Hollister, Secy.-Treas.

Jacksonville Dry Dock.

The Jacksonville (Fla.) Dry Dock & Repair Co. has been chartered with \$750,000 capital. Its officers are: E. T. Terry, Prest.; S. L. Waller, Vice-Prest.; J. W. Hollister, Secy.-Treas.

New Shipyard for Baltimore.

Steel cargo-vessels will be built at Baltimore by the Union Shipbuilding Co. of Philadelphia. Eight ways will be constructed for 550-foot ships and the plant site is a 60-acre tract on the water-front.

Shipbuilding Notes.

Twelve more ships for the Government will be built at the Houston shipyard of the Midland Bridge Co. of Kansas City. They will be barges, two of Ferris type for 3500 tons and ten of schooner type for 2500 tons.

Treenails for the construction of wooden ships will be manufactured by the Black Locust Treenail Co., Asheville, N. C., incorporated by David P. Ravenal, R. P. Harris and C. W. Graybeard. The capitalization is \$20,000.

Brazil and the Export Trade of the United States

New York, August 14.

Editor *Manufacturers Record*:

Brazil's entrance into the war on the side of the Allies has helped to focus attention upon the trade opportunities presented by this, to a great extent, still virgin country. The United States of America have here an opportunity for trade expansion of which they should not fail to avail themselves. Our Allies will certainly enter into competition with us just as soon as the war is over, whereas by rights of proximity, if nothing else, the United States should be the country which ought to profit most by the situation created by the war. The war has emphasized to all republics of the Western Hemisphere their mutual interdependence, and if we do not profit by the opportunity which thus presents itself it will be our own fault. Public opinion in the Western Hemisphere undoubtedly calls for closer ties, racial, political and commercial.

Before the war Brazil placed the greater part of her foreign orders in Europe. Owing to lack of interest, initiative and organization and also owing to inadequate transportation facilities, American capital-

ists, manufacturers and exporters failed to compete successfully with foreign interests. With the active and intelligent co-operation of their respective governments, business leaders of England, France, Germany, and other foreign countries conducted successful campaigns for trade extension and these nations were reaping the reward of effort, leaving the United States to suffer by comparison.

With the war came a change in the situation. Brazil looked to the United States for the commodities which hitherto she had sought in the Old World, but which she was unable to secure under war conditions. Our business leaders saw a new field for expansion and beginnings have been made in the creation of a better relationship with our sister republic of the South. Whether or not this new bond shall develop and become permanent depends on our future course. In the keener competition that will surely come with peace the trade of Brazil will again flow in greatest measure to the nations that cultivate it most thoroughly. The logical nation to lead is the United States. Are we going to take advantage of it?

At the present time Brazil offers a large field to American manufacturers and exporters who deal in material for railways, bridges, mines, public utilities, farms, plantations, etc. Its railway systems are wholly inadequate and greater facilities for communication are required to develop the latent wealth of forest, mine and plain. Brazilian firms are eagerly looking for opportunities to place orders in the United States for rails, locomotives, plates and steel products generally, and some of our leading exporters are now conducting widespread campaigns to attract to this country a volume of business that formerly went to the leading countries of Europe.

There is also in Brazil a large and undeveloped field for the selling of American autos, trucks and farm tractors. The Brazilian government has striven to facilitate the importation of these, realizing the part they play in promoting national prosperity. The superiority of the American machine is unquestionable, but until now foreign manufacturers have been able to place their products and outstrip us by more efficient methods of salesmanship and business extension. At last, however, the larger American business houses seem to be alive to the situation. American-made products are supplanting the foreign article and American trucks and farm tractors are becoming a familiar sight on the streets of Rio de Janeiro and the great farms of the interior.

Business conditions in Brazil are rapidly recovering from the disorganization incidental to the war, and the total of Brazilian annual trade should serve as a stimulus to live American companies, and although at the beginning of the war Brazil suffered more than any other South American country, the depression has been largely offset by the recent growth in iron, cattle and mining industries. In fact, the war to some extent has proved a blessing in disguise to Brazil, in having helped to make the country more dependent upon itself than it was in ante bellum days.

It may not be generally known that immediately prior to the outbreak of the war Brazil was negotiating with Germany for a loan of a considerable amount. It is fairly self-evident that such negotiations were not undertaken by Germany from motives of pure disinterestedness. We may safely assume that if these negotiations had gone through, Germany would have seen to it that she would reap very considerable advantages from any monetary obligations which she might have been able to impose upon Brazil, and that the Brazilian Republic while nominally paying perhaps 5 or 6 per cent. for the accommodation was in reality paying 10 per cent. Of course, the outbreak of the war put a complete stop to all such attempts on the part of Germany to foister herself industrially upon a weaker nation. The immediate result to Brazil was a very acute business depression, because none of the Allied nations were in a position to render the help which Brazil needed, nor were the United States sufficiently wide-awake to take advantage of the opportunity which thus presented itself. It took the country some time to overcome the depression caused by the outbreak of the war, but today the situation is vastly different, so much so that Brazil is in a position to give very active and very real assistance to the cause of human freedom for which we are fighting.

Brazil is the only South American Republic which might be said to be actively in the war on our side. She has sent a number of her ships to European waters and will presently have ready an army of something

like 100,000 men to be transported abroad, if necessary, to fight shoulder to shoulder with our own boys.

All these facts should be an added incentive to us to do everything in our power to establish closer commercial relations, and our manufacturers and exporters by understanding Brazilian trade untiringly and efficiently can increase their business a thousand fold.

By appointment of wide-awake agents, by personal investigation, by the arrangement of adequate terms, practical financial facilities and campaigns of advertising our industries can arouse in Brazil a demand for American manufacturers and direct into American channels a large part of the business that has heretofore flowed elsewhere.

As a nation we have talked and written much about this Brazilian opportunity and Latin American opportunity in general. Let us now act promptly and intelligently, realizing that we are backed by the active co-operation of our Government and the organized civic and commercial bodies of the United States. Somewhere or later this world war will burn itself out and then will come the real test of American resourcefulness. Whether we shall emerge the leading commercial nation of the world or the imitator of our foreign competitors is for our business leaders to decide.

H. LAD LANDAU,
General Manager of Sales,
W. J. Crouch Company, Inc.

After the War

By JOHN L. McLAURIN.

Civilization reached its climax when two months ago American Marines at the village of Cantigny checked the Black Eagle of Prussia. War in all the ages has been the tremendous lever which has lifted mankind from one epoch to another. It is a mighty evolutionary force, burying in its tumult and wreckage all that we hold dear. The world is in agony, filled with terror, blood and death. Mighty nations are vanishing like sunset shadows and fruitful fields are given over to graves. After humanity has been done to the very gates of death the Beast of Berlin will be cast into the depths of hell, followed by the contempt of all mankind; then the spirit of peace shall cover all nations, as the waters cover the sea, and at the bottom of that sea shall lie crowns and scepters, class privileges and all those things which impede and hinder the upward march of man. In the freshness and silence of a new morning the Divine Husbandman will come forth and sow the seed of a new civilization which shall mean that the holy spirit of justice, progress and brotherly love will turn the energies of man into constructive instead of destructive channels.

Scissors for Government.

An increase of daily capacity to 250 dozen scissors has been arranged by the Solid Steel Scissors Co., Fort Smith, Ark., now manufacturing 200 dozen daily and supplying 75 per cent. of its output to the Government. An additional building is being erected in which to install the machinery for the increased capacity. Further Government orders are expected.

War Eagle Series.

R. C. McWANE, Secretary The Cast-Iron Publicity Bureau, New York.—I received your package of War Eagle Series of editorials, and wish to express my appreciation for your goodness in sending these to me.

I have read them most carefully, and feel anyone after perusing the soul-inspiring words you have expressed cannot but feel more proud than ever to have American blood coursing through one's veins. I shall pass these editorials along to my various friends, but with the understanding that they are to be returned to me, for I know I shall enjoy a second and a third reading.

Your writings are doing more good toward enlightening and disseminating knowledge as to the whys and wherefores of this great struggle than any other publication I know of.

More power to you!

Heartily Coincides With Our Views on German Matters.

F. FOSDICK, President The Fitchburg Steam Engine Co., Fitchburg, Mass.—We are in receipt of copy of your magazine of August 1; have read what you have said in regard to German matters, and you will please enter our subscription for the paper as backing you up in your views and expressions.

We are glad for the positiveness and clarity of what you are writing. Let us know what the price will be, and we will send you check.

Strength to your elbow!

RAILROADS

CANNOT TAKE OVER PUBLIC UTILITIES.

President Wilson Gives Opinion in the Case of the New Orleans Railway & Light Co.

An opinion recently given by President Wilson concerning the New Orleans Railway & Light Co. is of great importance to street railway and other public utility corporations generally. This company, being confronted with the problem of how to raise sufficient money to pay to its employees an estimated increase of \$2,000,000 a year, Mayor Martin Behrman telegraphed to the President suggesting that the Government take over the operation of the company, also saying in his telegram: "The condition of the New Orleans Railway & Light Co. is critical, owing to the increase in the wages recently awarded employees by the War Labor Board and a continued advance in the cost of fuel and other materials."

The President's reply, sent by Secretary Tumulty, said:

"The President asks me to acknowledge your important telegram of yesterday and to express his opinion that as the existing law is interpreted the Federal Government has no power to take over electrical railway and lighting companies. The conditions under which such companies operate in different parts of the country vary by so wide a margin that no common rule, it would appear, or method of relief, could be applied to them, and it is the President's judgment that it is imperatively necessary that local and State authorities should take the action necessary for immediate relief."

The city of New Orleans has for some time been considering the possibility of taking over the railway and light company properties, but has not been able to see its way clear to do so. The idea has not, however, according to a report from New Orleans, been wholly abandoned and the municipal authorities are awaiting the preparation of a report which is expected to show the value of the plant and thus enable them to make an estimate of the financing which would be required to place the railway and light service upon a secure foundation. At present receipts are far short of expenses, and it is said that even six-cent fares on the cars would not give adequate relief.

In connection with this it is interesting to note a report saying that the National Public Utilities Committee has created an organization over the whole country to collect data on what is being done by public utility companies to secure relief by increased rates to be authorized by local authorities. There is a national committee including the staff in Washington and over 100 representative public utility men. The Investment Bankers' Association of America has offered to co-operate with the local committees also formed.

This report further says: "To convince Washington officials that the public utilities have made the greatest possible effort to secure relief from the local authorities, the Regional and State committees will ascertain and report to the National Committee what companies are in need of relief, what action has been taken toward securing it and what the results have been."

OVER \$1,000,000,000 FOR RAILROADS.

Increase of 1918 Budget Mainly for New Cars and Locomotives.

The budget for the year's requirements of the lines under the control of the United States Railroad Administration has been increased by \$156,000,000, making a total of \$1,097,398,000, according to a statement at Washington covering a detailed report of capital expenditures which have been authorized. Most of the increase is for equipment, the authorizations for new cars and engines being increased to \$655,686,000. For additions and betterments, including new yard and industrial tracks, terminal facilities, stations and bridges \$404,000,000 is the total, this being reduced nearly \$20,000,000 as compared with the original estimates, but other work of this nature totaling \$105,000,000 has been authorized to be charged against operating expenses. Extensions and branches will claim \$35,000,000 instead of \$20,000,000.

It is further stated that up to July 1, \$88,500,000 had been spent, one-fifth of this being for yard tracks, sidings and industrial tracks, while \$12,000,000 were spent for main line tracks, \$8,600,000 for stations and

offices and \$8,000,000 for bridges, trestles, culverts, etc., these latter figures covering 141 of the 168 roads under Federal control. Some other expenditures were these: Shops, roundhouses, etc., \$6,360,000; rails and other track materials, \$6,149,000; shop machinery and tools, \$3,446,000; signals and interlocking plants, \$2,670,000; water stations, \$2,236,000; electric-power stations, \$2,313,000.

The last half of the year is expected to show much greater activity and speed in railroad work which must be completed before the coming of winter.

INTERCHANGEABLE MILEAGE BOOKS.

They Are Also Transferable and Any Number of Passengers May Ride on Them.

One of the changes established by the United States Railroad Administration which will doubtless prove popular is the selling of passenger mileage books interchangeable and good on any railroad under its control. They were placed on sale August 20. There are two sizes of these books. One contains 500 coupons, each good for one mile. This sells for \$15, plus \$1.20 war tax. The other book contains 1000 coupons and sells for \$30, plus \$2.40 war tax. The coupons will be accepted in payment of fares on trains, in exchange for tickets and also for excess baggage charges. The books are transferable and one may be used for any number of passengers at the same time. Travelers are advised to have coupons exchanged for tickets in order to gain the advantage of choosing the shortest route between points and thus save money, as all charges are at the three-cents-a-mile rate. These mileage coupons will not be accepted for sleeping car or parlor car charges, as the war tax in this case is 2 per cent. higher than for railroad fares.

Director-General McAdoo has issued a statement to the public concerning complaints of overcrowded trains, and he urges that everyone refrain from traveling unnecessarily, saying that every man, woman and child who can avoid using passenger trains at this time should do so, for they will not only liberate transportation facilities necessary for war purposes, but they will save money to buy Liberty bonds. Nevertheless, the Railroad Administration is making every effort possible to give prompt and comfortable passenger train service, but the military demands of the situation are such that equipment is used to the fullest degree and is consequently scarce, while it is impossible to supply car and engine shortages at once.

Another statement is addressed to all railroad employees urging them to be courteous and to facilitate the business in every way possible.

Iuka, Miss., to Reform, Ala.

The Iuka North & South Railroad Co., capital stock \$1,000,000, has been organized at Iuka, Miss., according to a letter received by the MANUFACTURERS RECORD from Theo. A. Smith, Iuka, who also says that survey will begin in a few days for the first work on the proposed line, which is to run from Iuka southward toward Reform, Ala., about 100 miles, to connect there with the Alabama, Tennessee & Northern Railway for Mobile. Later a line north from Iuka to some point in Tennessee yet to be named is to be constructed. It is desired to get in touch with contractors, material men and builders of railroad equipment. Headquarters will be at Iuka. The officers are: Theo. A. Smith, president; F. F. Carmack, vice-president; T. M. McDonald, secretary and treasurer, and Geo. L. McMaster, industrial agent.

Change of Name.

The Shenandoah Traction Co. is the new name of the Blue Ridge Light & Power Co. operating the street railway at Staunton, Va. The lighting and power plant is known as the Staunton Lighting Co. The officers of the railway company are John H. Adams, president and general manager; S. D. Timberlake, Jr., vice-president; M. O'Donnell, treasurer; R. E. Nelson, secretary.

Urges Use of Gulf Ports for Exports

Austin, Texas, August 17—[Special.]—B. F. Bush of St. Louis, regional director of railroads in the Southwest, in conference with members of the Texas State Railroad Commission at Austin, discussed the matter of greatly increasing export traffic through ports on the Gulf coast of Texas by diverting shipments

from Eastern seaboard points to Galveston, Port Arthur, Beaumont, Texas City, Houston and Arkansas Pass. He said that now is the time for the government to relieve the freight congestion in the East and expedite the commerce of the country by using available and well equipped ports on the Gulf Coast.

Richmond-Ashland Line to Be Sold.

Announcement is made at Richmond, Va., that the property of the Richmond & Chesapeake Bay Railway Co. will be sold at auction August 28 by L. W. McVeigh, but notice is also given that no bid will be binding until it is approved by the liquidating trustees. The line, which runs from Richmond to Ashland, Va., 14 1/4 miles, is subject to a deed securing \$1,000,000 of 5 per cent. 30-year first mortgage bonds due November 1, 1937. Frank Jay Gould of New York is president; A. W. Kelly, vice-president, and George H. Taylor, secretary and treasurer, both at 149 Broadway, in the same city. The road ceased operation in December last.

Receiver for a Georgia Line.

A. K. Sessoms, of Waycross, Ga., has been appointed receiver of the Waycross & Western Railroad Co., the bill filed on behalf of the holders of the first mortgage bonds alleging that interest is in default. The bonds consist of 5 per cent. 30 year gold bonds due August 1, 1943, the total authorized issue being \$710,000. Mr. Sessoms is president of the company. The road is 45 miles long from Waycross to Milltown, Ga. It is proposed to extend it to Adel, Ga., 26 miles more, and part of this has been under construction, the Empire Construction Co. having charge of the work.

"Spruce Railway" to Get Airplane Timber.

Sunburst, N. C., August 17—[Special.]—High up in the mountain ranges of Western North Carolina, Company A, 106th United States Engineers, is building what has been named the "Spruce Railway," from Sunburst, in Hayward county, three miles into the heart of a splendid spruce forest, to get that timber for the manufacture of airplanes. The work has been heavy, and was begun in the last week of April, but the engineers have put it through in good style. The timber is prepared at a special mill at a place on the line. Some of the work was very difficult.

Building 50 Cars.

A report from Quitman, Miss., says that R. F. Morse, general manager of the Long-Bell Lumber Co.'s plant there and also general superintendent of the Mississippi Eastern Railway, is having built at the company's shops in Quitman 50 more platform, box and logging cars to meet the demands of increasing traffic. This line connects with the Mobile & Ohio Railroad at Quitman.

A Valuable Book.

A large, unique and finely prepared book relating to Indianapolis and its advantages as an industrial center has just been gotten out by B. A. Worthington as chairman of the industries committee of the Indianapolis Chamber of Commerce. It is full of information presented on broad pages with accompanying diagrams and illustrations of superior character. Mr. Worthington, who is also general manager of the Cincinnati, Indianapolis & Western Railroad, has considered his subject with wonderful perception and skill, directing the attention of the reader to the advantageous location of the city with relation to sources of supply and also to distributing points. He emphasizes the fact that the thrift of an enterprise well located will compensate for minor disadvantages, and he has assembled his data with painstaking accuracy to demonstrate that Indianapolis possesses in a superlative degree the advantages of location which captains of industry seek. Maps appropriately colored show where wheat and corn grow in America, where iron and steel are produced, where coal is mined, where commercial timber grows, and its different varieties, together with much other valuable matter. Although the aim of the book is to advance the interests of Indianapolis along the lines of industry, it contains so much data of a general nature that it would be useful to almost everyone, and it is especially noteworthy as an example of intelligent effort at community development. As such it is worthy of study by cities of the South.

TEXTILE

Bleaches Linters for Nitrating.

With daily capacity of 10,000 pounds, the Demopolis (Ala.) Fiber Co. will bleach linters for nitrating. This \$20,000 company (lately mentioned as incorporated) has a \$12,000 equipment of machinery in a brick building of the Alabama Lumber & Supply Co., which supplies power. It has organized with these officers: I. F. McLean, president; E. B. Barnes, vice-president; S. N. Owens, secretary-treasurer.

Bell Hosiery Mills.

Children's ribbed cotton hosiery, 2500 dozen pairs daily, is the product of the Bell Hosiery Mills Nos. 1 and 2, Suffolk, Va. This company has purchased the Suffolk Hosiery Mills, and that constitutes its No. 2 plant, including a 350x125-foot site, 350x40-foot knitting-room, 120x40-foot finishing-room, 80x40-foot dye-house and 100x60-foot office and storage-room. The No. 2 plant machinery includes 110 ribbers, 140 footers, 30 loopers, electric-power equipment, etc.

Kahn & Feldman Silk Mill.

By September 15 Kahn & Feldman of New York expect to begin producing silk yarn at their Parkersburg (W. Va.) plant. The three-story, 304x54-foot brick building is about completed, the cost being \$50,000. Its equipment of machinery, costing \$100,000, is now arriving for installation and will employ 300 operatives.

Hickory Hosiery Mills' Addition.

Manufacturing has begun in the Hickory (N. C.) Hosiery Mills' addition, the daily production being 250 dozen pairs of infants' ribbed hose. This addition includes a mill construction building with knitting machinery and chain drive electric motors, the cost of all being \$15,000.

To Manufacture Woolen Goods.

The A. S. Woolen Mill, Charleston, W. Va., has been incorporated by Joseph P. Murphy, Frank S. Murray and others, all of Philadelphia. Its capital is \$20,000.

Textile Notes.

The Ranlo Manufacturing Co., Gastonia, N. C., has increased capital to \$500,000.

An increase of capital to \$250,000 has been announced for the Stony Point (N. C.) Manufacturing Co.

The Dixie Manufacturing Co., Atlanta, Ga., will add 2000 spindles to its 1000-spindle cotton yarn and twine mill.

H. E. Perry, W. J. Christian and J. C. Wynne, Durham, N. C., have incorporated the Paragon Hosiery Mills.

An increase of capital to \$90,500 is announced for the North State Knitting Mills, Raleigh, N. C., and it is reported that the company will build an additional plant.

A Great Steel Leader Who Is in Full Accord With the Views of Manufacturers Record.

E. A. S. CLARKE, President Lackawanna Steel Co., New York.—Thank you very much for your letter of August 2 and for the War Eagle Series of your editorials, which have just reached me. I have read them all carefully with very great interest, and want to thank you for the privilege of being able to do this and for the fine spirit of patriotism that you have shown in reprinting and circulating them.

I can only say that I am in the fullest accord with the sentiments that you express, and believe that in giving further publicity to these editorials you are performing a splendid patriotic service.

Blot Out the Hun.

E. A. OSBORNE, Secretary and Treasurer D. B. Morrison Co., Manufacturers of Yellow Pine Lumber, Morriston, Fla.—Enclosed our renewal to your magazine, the best publication on earth. We are in the sawmill business, and each and every one, from the manager down to the humblest laborer, is doing his level best to blot the accursed Hun from the face of the earth, and we trust and hope this may be his ultimate doom, as such cattle as they are have no right to live and breathe the air of this good old world.

May your editor live long enough to see his prophecies come true, as he is the writer supreme on the uppermost topic of today.

Good Roads and Streets

Bonds Voted.

Fort Myers, Fla.—Lee county will issue \$20,000 bonds for road construction.

Bonds to Be Voted.

Fayette, Mo.—Howard county votes September 14 on \$700,000 of bonds for road construction.

Contracts Awarded.

Opelika, Ala.—Lee county will build 12-mile highway.

Cisco, Tex.—City awarded a \$32,700 contract for paving.

Waco, Tex.—McLennon county awarded a \$26,680 contract for 3½-mile road with bridging.

Harriman, Tenn.—Solomon Construction Co. has contract for 15 miles of highway grading.

Colorado, Tex.—S. E. Brown, Lorraine, Tex., has \$20,000 contract for concrete-road construction.

Opelousas, La.—St. Landry Parish awarded contract for 50,000-yard dirt road, with bridges, \$25,000 being available for expenditure.

McCormick, S. C.—McCormick county awarded \$15,923 and \$3253 contract grading and construction of drainage structures on 11-mile highway.

Contracts to Be Awarded.

Greenville, S. C.—War Department will expend \$150,000 to improve roads.

St. Louis, Mo.—State will construct 3-mile brick pavement to cost \$78,000.

Richmond, Va.—City has \$35,000 appropriation for paving street to Government plant.

Jefferson City, Mo.—Cole county opens bids September 2 for 26-mile road construction.

Pocahontas, Ark.—Randolph county opens bids September 2 for 10-mile highway construction.

Bristol, Tenn.—City opens bids in September for 15,000 square yards of asphalt paving, etc.

La Plata, Md.—Charles county receives bids until August 27 for 3½-mile highway construction.

Montgomery, Ala.—War Department will expend \$140,000 for road construction to Fort Sheridan.

Abingdon, Va.—Washington county opened proposals on August 19 for 3900 linear feet of water-bound macadam road construction.

Daytona Beach, Fla.—City invites proposals until September 3 for 14,000 square yards of pavement, 2000 cubic yards of excavation and 8000 linear feet of concrete curbing.

MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Finishing Machine for Concrete Roads.

A concrete road-finishing machine that eliminates the voids in concrete and by the use of which the proportion of coarse aggregate may be increased considerably is one of the newest additions in the line of road-building equipment.

This machine moves forward under its own power at a speed of about seven feet per minute and backs up at a speed of 28 feet per minute. As it travels forward the strike-off spreads the concrete to the necessary height and proper crown. The tamper, immediately back of the strike-off, tamps the concrete the first time over with a long, hard stroke.

The second time over a short, rapid, up-and-down movement is used, which may be decreased until it is subjecting the concrete to continuous agitation without applying pressure to the mixture. The stroke of the tamper is regulated by the operator, and may be varied for different consistencies of concrete as well as for different stages of progress. The float, located at the rear of the machine, produces a smooth finish by sweeping a belt across the surface at a comparatively slow speed.

By subjecting the mixture to the continuous agitation caused by the tamper, the concrete is compacted and the air in it is brought to the surface. The larger stones and only enough mortar to cement them are brought together. Because of the agitating action of the tamper, a drier mixture can be used with this finisher than would be possible where the work is done by hand. This, of course, results in a stronger concrete and pro-

duces a surface free from laitance, silt and light particles which float to the surface of a wet mixture.

The view shows the road finisher in use on the 15-foot Belleville (Ill.) Scott Field road in St. Clair county, where its use has been attracting considerable attention from engineers and contractors. On this work a 1-2-3 mixture is being used. It permits the use of a drier, coarser mixture than could be worked by hand.

The machine was designed in 1913 by E. G. Carr while a contractor in California, and this type has been used on the construction of about 400 miles of California's famous highways.

It is manufactured by the Lakewood Engineering Co., Cleveland, O., and by the staff of that company its mechanical details have been refined so that the present product is a highly efficient contribution to the building of better concrete roads.

The Belleville job is being done by Keeley Bros. of East St. Louis. D. O. Thomas is county highway engineer and Frank Sheetz is engineer in charge of the work. The concrete road will be 6 miles long, 15 feet wide, 6 inches on the sides and 7½ inches thick at the center.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Hardware, Machinery and Tools.

JAYME DA COSTA, 16 Rua dos Correios, Lisbon, Portugal.—We import machinery, metals, tools and hardware in general. Therefore, we are pleased to receive manufacturers' literature and quotations. We are particularly interested to establish good relations for after-the-war business.

From Island of Aruba.

KAREL CROES, Aruba, A. H.—I desire agents, to act for the sale of my products, at New Orleans, Boston, St. Louis, Philadelphia and San Francisco. I can supply aloes, bird-dive (used in tanning leather and dyeing), wool, hides, hats (hipihappa), jipijapa and palm leaf. I am in the market to purchase goods of American manufacturers.

For American Manufacturers.

HERBERT J. CAMACHO, 137 Tower St., Kingston, Jamaica, B. W. I.—Hand us names and addresses of manufacturers of hosiery, underwear, pajamas, chocolate confectionery, shirts, collars and other textiles.

For France and Colonies.

S. B. CORTHUAL, Compagnie Generale Francaise D'Exportation, 78 Rue Michel-Ange, Paris, France.—We place ourselves at your service for any commercial or manufacturing business in France or her colonies. Our warehouses are open for storage of goods in transit and awaiting sale. We take orders for any product.

Beverage and Ice Machinery.

RUBENLO HUBER, 92 Antiguo, Habana, Cuba.—I am interested in the following machinery and material, etc., for client who is establishing plant: Anhydrous ammonia, for



THE ROAD-FINISHING MACHINE AT WORK.

manufacture of ice, in consecutive shipments, prices to be quoted, if possible, f. o. b. American port of shipment; machinery for manufacture of carbonated drinks, daily production, 1000 cases of 24 bottles each, to increase to 300 cases; electric motor of 200 H. P., 110 volts, to move above machinery; material for manufacture of ice. The machinery specified may be either new or second-hand; in latter case must be guaranteed to be in first-class operating condition, and prices correspondingly lower.

Construction Department

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

AIRPLANE PLANTS, STATIONS, ETC.

N. C. Goldsboro—Airplanes.—Carolina Airplane Co., Harry L. Atwood, Pres., Raleigh, will erect latently-noted plant; pending erection, lets contracts to Empire Mfg. Co., Goldsboro; latter company has contract for 20 airplanes for the Carolina company.

BRIDGES, CULVERTS, VIADUCTS

La. New Orleans.—Port Comms., John R. Loomis, Purchasing officer, 833 Canal St., ask bids until August 27 for furnishing and erecting on foundations furnished, 4 double-track railway and highway Strauss truss bascule bridges at railway crossings, Inner Harbor Navigation Canal; specifications, etc., at offices of Comms. and of Geo. W. Goethals & Co., Engrs., 40 Wall St., New York. (See Machinery Wanted—Bridges.)

La. Opelousas.—St. Landry Parish, F. O. Parry, Pres. Police Jury, let contract to R. M. Holler, Opelousas, to build bridges in connection with road construction. (See Road and Street Work.)

La. Tallulah.—Madison Parish Bridge Comsn. let contract J. H. Scruggs Construction Co., American Trust Bldg., Birmingham, Ala., at \$10,000 to construct 30-ft. bridge over Bayou Brushy, Fortunes Fork, 30-ft. bridge over Bayou Mack at Bruce Plantation and 30-ft. bridge over Bayou Bull Calf at Bozeman Plantation; all of reinforced concrete construction.

Va. Hanover.—State Highway Comsn., G. P. Coleman, Comsr., Richmond, Va., asks bids until August 26 to construct reinforced concrete bridge across North Anna River, on Richmond-Washington Highway, between Hanover and Caroline counties. (See Machinery Wanted—Bridge.)

Va. Stafford.—Spotsylvania County Comms. will expend \$10,000 to rebuild bridge.

CANNING AND PACKING PLANTS

Fla. Plant City.—E. W. Wiggins let contract for equipment of latently-noted packing plant; daily capacity 3 cars oranges; has building.

Mo. St. Louis.—Sieloff Packing Co. will build \$6000 addition to cooler.

N. C. Wilmington.—Virginia Dare Hunt Club, Box 291, is interested in proposed cannery for oysters, shrimp and vegetables. (See Machinery Wanted—Canning Machinery.)

COAL MINES AND COKE OVENS

Ala. Boaz.—Champion Coal Co., 510 Brown-Marx Bldg., Birmingham, organized; W. C. Rust, Pres.-Mgr.; J. B. Knight, Sr., V.-P.; W. H. Pattie, Secy.; J. T. Knight, Treas.; all of Birmingham; develop 600 acres; daily capacity 300 to 400 tons. (Latently noted chartered, \$20,000 capital.)

Ala. Delta.—Shinbone Mining Co. organized; capital \$10,000; Vassar L. Allen, Pres.; Jno. E. Hayes, V.-P.; Polk King, Secy.

Ky. Whitesburg.—Elkhorn & Jellico Coal Co. organized; M. K. Marlowe, Pres.-Mgr.; H. L. McGhee, V.-P.; P. E. Marlowe, Secy.; Jas. A. Marlowe, Treas.; develop 550 acres; install mining cars. In July, noted inceptd., \$500,000 capital, leasing lands, develop townsite, etc. (See Machinery Wanted—Cars.)

Okla. Miami.—Cherry Creek Oil, Gas & Coal Co., capital \$10,000, inceptd. by J. Walter Morris, F. M. Connor and J. W. Bewley.

Tenn. Jacksboro.—Smith Blue Gem Coal Co., capital \$4000, inceptd. by A. W. Smith, Jr., R. Y. Gray, Jr., Jay Lindsay and others.

Va. Bristol.—Consumers' Coal Mining Corporation chartered; capital \$15,000; Jos. A. Caldwell, Pres.; L. O. Caldwell, Secy.

W. Va. Charleston.—McBower Coal Co. inceptd. with \$50,000 capital by W. D. Bowerman, Clyde B. Johnson, Jas. L. Long and others.

W. Va. Clarksburg.—Catherine Coal Co. chartered with \$50,000 capital by Carl L. Horner, Henry W. Thrasher and others.

W. Va. Huntington.—Hocking Fuel Co., capital \$50,000, inceptd. by W. C. Pollock, Jean F. Smith and others.

W. Va. Shinnston.—Shinn Run Coal Co., capital \$50,000, inceptd. by Guy A. Hardesty of Shinnston, F. P. Patterson, E. C. Peeler, both of Pittsburgh, Pa., and others.

COTTON COMPRESSES AND GINS

Ark. Manson.—Manson Mercantile & Gin Co., capital \$16,000, inceptd. by W. T. Holland and others.

Fla. Lakeland.—T. L. Hendrix, A. F. Pickard and associates will install cotton gin; have building; ordered machinery.

Fla. Miami.—Eli McDonald, F. J. Pepper and others plan to build cotton gin.

N. C. Wilson.—Wilson Compress & Storage Co. organized with \$125,000 capital; P. L. Woodard, Pres.; Ernest Deans, Secy., 111 W. Nash St.; erect mill-construction buildings, cost \$50,000; install high density cotton compress; daily capacity 750 to 1000 bales; entire plant, including storage facilities for 30,000 to 40,000 bales, estimated to cost \$150,000. (Latently noted planned by Chamber of Commerce.)

Okla. Hugo.—Choctaw County Gin Co. inceptd. by R. D. Wilbur, Charlton Barksdale and D. M. Weir; capital \$15,000.

S. C. Chappells.—Chappells Gin Co. chartered with \$5000 capital by H. C. Strother of Chappells and M. T. Turner of Johnston, S. C.

S. C. Nesmith.—Lattevast-Cooper Co. chartered with \$6000 capital by J. B. Tallevat, G. B. Cooper and J. M. Rogers.

S. C. South Lynchburg.—Lynchburg Co-operative Ginnery Co. organized; capital \$6000; G. W. McKnight, Pres.; L. Lane, V.-P.; E. Boyce, Secy. (Latently noted inceptd.)

Tex., Houston.—Anderson & Clayton will erect compress building and boiler-house, costing \$30,000; let contract to Horton & Horton, Houston.

Tex., Lockhart.—Lockhart Compress Co. reorganizes company of same name; J. W. Kurbach, Pres.; E. B. Coopwood, V.-P.; Arthur E. Carter, Secy.-Treas.; W. L. Inman, Supt.; no improvements contemplated at present. (Latently noted chartered, \$50,000 capital.)

COTTONSEED-OIL MILLS

Ga. Atlanta.—J. H. Harbener & Co. will rebuild cotton-oil waste factory reported burned at \$5000 loss.

Tex., Fort Worth.—Cotton Seed Products Co. inceptd. with \$5000 capital by W. R. Edrington and others.

DRAINAGE SYSTEMS

Ky., Paducah.—Mayfield Drainage Dist. plans construction to cost \$300,000.

Mo., Chillicothe.—Medicine Creek Drainage Dist., Paul D. Kilt, Secy., asks bids until August 30 on 600,000 cu. yds. excavation and ditch work; Engr., C. E. Jacoby Engineering Co., Shukert Bldg., Kansas City, Mo.

Mo., Grant City.—Worth County Drainage Dist. No. 1 plans construction to include provision for 10,000 acres flood prevention; C. E. Jacoby Engineering Co., Engr., 514 Shubert Bldg., Kansas City, Mo.

ELECTRIC PLANTS

Ark., Ashdown.—Consolidated Public Service Co. contemplates installing additional new generator and engine in electric-light plant.

D. C., Washington.—Potomac Electric Power Co. plans issuing \$2,100,000 bonds for extension and improvements to electric generating and transmitting facilities.

Fla., Labelle.—C. W. Shaefer and others, Cleveland, O., are reported to build electric-light plant. (See Land Developments.)

Mo., Holden.—Holden Electric Light Co., latently noted as considering rebuilding of burned plant, will purchase electricity, to be transmitted from Pleasant Hill, as recommended by Archer & Stevens, Consult. Engrs., 609 New England Bldg., Kansas City, Mo.

Mo., Appleton City.—City, Grover C. Shantzler, City Clerk, voted \$15,000 bonds for electric-light plant improvements; W. B. Rollins & Co., Engrs., Railway Exchange Bldg., Kansas City, Mo.

Mo., Kansas City.—Kansas City Light & Power Co. will erect sub-station at 12th and Bristol Aves.; A. E. Bettis, Supt.

Mo., Novinger.—Merchants' Light & Power Co. will rebuild burned plant.

N. C., Southport.—Southport Electric Light & Power Co., capital \$30,000, inceptd. by Mrs. Elizabeth Marion Muppleyea of Southport, G. W. Ruppelyea and Wm. M. Bellamay of Wilmington.

Okla., Duncan.—City proposes building power plant addition; Benham Engineering Co., Engr., Colcord Bldg., Oklahoma City.

Tex., Atlanta.—Atlanta Light & Ice Co. will rebuild electric plant and ice factory reported burned at \$70,000 loss.

Tex., Ranger.—Chamber of Commerce proposes erection of electric-light plant.

Tex., Somerville.—Gulf, Colorado & Santa Fe Ry. will build electric power-house.

Va., Richmond.—City appropriated \$12,000 for additional electrical facilities; furnish electricity to Government boiler-plate plant. Address City Engineer.

W. Va., Hutchinson.—Monongahela Valley Traction Co., Parkersburg, W. Va., is reported to build addition to electric-power plant. (See Rivesville.)

W. Va., Rivesville.—Monongahela Valley Traction Co., Fairmont, W. Va., plans \$2,500,000 loan; wires Manufacturers Record; Amount is to complete work under way, including Rivesville power plant; gas-produce plant; gasoline plant; drilling gas wells; laying gas mains; paving; extending transmission lines; developing coal land; sinking 2 shafts for mines; build 25 houses.

FERTILIZER FACTORIES

Ala., Troy.—Standard Chemical & Oil Co. will re-erect building No. 2, reported burned at loss of \$200,000.

FLOUR, FEED AND MEAL MILLS

Ky., Louisville.—Wathen Milling Co., capital \$100,000, inceptd. by R. E., J. B. and O. H. Wathen.

Tenn., Chattanooga.—Winer Feed Co. chartered with \$10,000 capital by Harry Winer, Frank S. Carden and others.

Tex., Gainesville.—Whaley Mill & Elevator Co., 119 N. Denison St., will build flour mill; 7-story reinforced concrete structure; cost \$80,000; Nurdyke & Marmon Co., Engr., Indianapolis, Ind.

FOUNDRY AND MACHINE PLANTS

Ala., Anniston.—Ornamental Iron.—Ornamental Foundry Co. will rebuild plant reported burned.

Ala., Bessemer.—Steel Castings.—National Steel Products Co., 1412 Jefferson County

Bank Bldg., Birmingham, organized; W. J. Long, Pres., Bessemer; R. S. Bohannon, V.-P. and Mgr.; J. D. Pirrong, Secy.; both of Birmingham; erect 40x150-ft. mill-construction building; E. King, Archt.; install steel foundry equipment; daily output 25 tons steel castings. Supersedes recent item. (See Machinery Wanted—Foundry Equipment.)

D. C., Washington.—Boiler-works.—Bureau Yards and Docks, Navy Department, Washington, D. C., will build boiler-works extension; bids until August 26; estimated cost \$100,000.

D. C., Washington.—Forging Press.—Bureau Yards and Docks, Navy Department, Washington, D. C., will build 3000-ton forging press; invites bids (until August 26) for foundations and pipeline conduits to cost \$16,500. (See Machinery Wanted—Foundations, etc.)

Ga., Atlanta.—Foundry Products.—Pratt Engineering & Machine Co. will double foundry plant.

Mo., St. Louis.—Cars.—American Car & Foundry Co., Syndicate Trust Bldg., will build addition; machine and pattern shop; 2 story; 24x95 ft.; reinforced concrete; brick and steel construction on concrete foundation; cost \$250,000; Brussel & Vitterbo, Archts., Wright Bldg., St. Louis.

Mo., St. Louis.—Explosive Shells.—Laclede Gas Light Co., Munition Department, 1268 Russell St., advises Manufacturers Record: For Broadway plant erect \$750,000 buildings; mill construction; proposals opened Aug. 21; install hydraulic presses, turning lathes, heating plant, etc.; manufacture 155 mm. explosive shells; for Manchester plant erect \$600,000 buildings; mill construction; date of opening bids not set; install lathes, etc.; manufacture 240 mm. shells; J. A. V. Scheckenbach, Supt. Construction. (Latently noted to build, plans and specifications approved by War Dept., etc.)

Okla., Enid.—Tools.—Oil City Tool Co., capital \$25,000, inceptd. by W. F. Boone and others.

Okla., Enid.—Oil-well Tools.—Oil City Tool Co., capital \$25,000, inceptd. by Ray Parrish of Enid, and O. E. Fluharty of Pawnee, Okla.

Va., Hampton Roads.—Boiler Works.—Bureau Yards and Docks, Navy Department, Washington, will build \$100,000 boiler works.

Va., Richmond.—Locomotives.—American Locomotive Co., 30 Church St., New York, is reported to increase capacity of Richmond Locomotive Works; advises Manufacturers Record: Not definitely decided to increase capacity.

GAS AND OIL ENTERPRISES

Mo., Kansas City.—Filling Station.—Sinclair Refining Co., Firestone Bldg., let contract to Edelman-Fleming Construction Co., 610 Railway Exchange Bldg., to erect \$2000, 1-story, 24x24-ft. building.

Okla., Buffalo.—St. Louis-Buffalo Oil & Gas Co., capital \$100,000, inceptd. by John W. Bayne, J. W. Willett and J. W. Carl.

Okla., Drumright.—Oil Pipe Line.—Warm Pipe Line Co., controlled by Sinclair Oil & Refinery Co., Tulsa, Okla., and fostered by Government, will build 275 mi. oil pipe line from Drumright to Freeman, Mo.; 8-in. pipe to Humboldt, Kan.; 6-in. pipe to Freeman, there connecting with line to Whiting, Ind.; rights of way secured and piping ordered; daily capacity 2000 bbls. oil; whole cost \$3,500,000.

Okla., Enid.—Caseco Oil Development Co., 205 Stevenson Bldg., organized, capital \$100,000; M. L. Barnes, Pres. and Gen. Mgr.; E. J. Hemmer, Secy.-Treas. (Supersedes recent item.)

Okla., Okmulgee.—Developers' Oil Co., capital \$30,000, inceptd. by E. A. Scripture and others.

Okla., Okmulgee.—Okmulgee Allied Oil Co., capital \$100,000, inceptd. by K. W. McCulloch, O. K. Detrick and C. E. Reynolds.

Tex., Dallas.—Oil Refinery.—Columbia Oil Refinery Co. inceptd. with \$500,000 capital by W. F. Miller, Curtis Hancock and others.

Tex., Houston.—Columbia Oil Co., capital \$35,000, inceptd. by G. N. Peet, Meyer Rauch and others.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tex., Houston—Oil Refinery.—Empire Gas & Fuel Co. plans to build oil refinery on ship channel.

Tex., Houston—Oil Refinery.—Humble Oil & Refining Co. will build oil refinery; preparing plans and specifications; reported to have daily capacity 2000 bbls. oil and cost \$2,000,000; site on ship channel.

Tex., Mineral Wells.—Lyle Oil Co., capital \$50,000, inceptd. by C. E. Galbraith, Blake Swett and J. H. Greer.

Tex., San Antonio—Oil Refinery.—Geo. B. Ellgester of San Antonio, and H. H. Todd of Gainesville, Tex., will build \$350,000 oil refinery.

Tex., Wichita Falls.—Fowler Farm Oil Co. chartered with \$12,000 capital by S. L. Fowler, W. D. Cline and others.

Va., Yorktown—Oil Storage.—Bureau Yards and Docks, Navy Department, Washington, will install fuel-oil storage plant; specifications 3289; cost \$350,000.

W. Va., Charleston.—Big Marsh Oil Co. chartered with \$30,000 capital by Peter Schlegel, Ed. Jennings and others, all of Pittsburgh, Pa.

W. Va., Linn.—Gas Producer.—Monongahela Valley Traction Co., Parkersburg, W. Va., is reported to build gas-producer plant and lay 8 in. 5 and 6 in. pipe.

ICE AND COLD-STORAGE PLANTS

Ga., Brunswick.—Glynn Ice Co. will build plant; purchased site and machinery.

Ga., Macon.—Atlantic Ice & Coal Corporation will rebuild Waterville Road cold-storage department reported burned; had capacity 10,000 tons ice.

Md., Curtis Bay.—Baltimore & Ohio R. R., H. A. Lane, Chief Engr., Baltimore, let contract Frankie Bros. & Haigley, 18 Clay St., Baltimore, to erect ice plant in Curtis Bay section; 1 story; concrete.

Md., Indian Head.—Bureau Yards and Docks, Navy Department, Washington, has plans for cold-storage plant; install traveling crane, etc.; cost \$125,000.

Mo., Kansas City.—City contemplates voting in November on \$100,000 bonds to build ice plant.

Tex., Atlanta.—Atlanta Light & Ice Co. will rebuild ice factory and electric plant reported burned at \$70,000 loss.

Va., Ingleside.—S. E. Tillitt, Box 843, Norfolk, Va., will install ice plant, 1 to 10 daily tons capacity; erect brick or metal building; no contract for building. (See Machinery Wanted—Ice Machinery.)

Va., Lynchburg.—United Cigarette Machine Co. will install ice machine, small capacity. (See Machinery Wanted—Ice Machinery.)

Va., Newport News.—Sanitary Milk Products Co., Box 625, will build ice and cold-storage plant; details not decided. (Lately noted to install 8-ton refrigerating equipment.)

Va., Norfolk.—H. L. Harwood, 1032 Brambleton Ave., contemplates installing ice plant, daily capacity 1 to 2 tons, and ice-cream machinery, 50 to 75 gals. daily. (See Machinery Wanted—Ice Machinery.)

Va., Portsmouth.—Isaac Fass will establish ice and cold-storage plant; daily capacity 75 tons; has building.

Va., Suffolk.—J. Walter Hosier, care of Suffolk Cotton Gin & Grist Mill, will build and equip ice plant, 30 tons daily capacity. (See Machinery Wanted—Ice Machinery.)

Va., Richmond.—J. P. Wood, 1121 N. 31st St., contemplates establishment of ice plant. (See Machinery Wanted—Ice Machinery.)

LAND DEVELOPMENTS

Fla., Labelle.—C. W. Shaefer and others, Cleveland, O. propose to develop townsite; plans reported to involve \$500,000 expenditure for town, 80 ft. boulevard, 50 mi. side-walks, electric-light plant, water-works, sewer system, etc.

Ky., Louisville.—Nitta Yuma Co. chartered with \$25,000 capital by F. N. Lewis, A. G. Robinson and others; suburban development.

Miss., Ocean Springs.—Frank Frush of Cody, Neb., and Sioux City, Iowa, and Suburban Acres Co., G. C. Robinson, Treas., Sioux City, purchased 2000 acres land 2½ mi. from Ocean Springs; develop for general farming and livestock.

S. C., Meggetts.—South Edisto Farms chartered with \$30,000 capital; Jno. W. Geraty, Pres.; W. F. Carr, Gen. Mgr.

Va., Roanoke.—Willette Heights Corporation chartered; capital \$50,000; J. T. Bandy, Pres.; L. E. St. Clair, Secy.

LUMBER MANUFACTURING

Fla., Pompano.—Cypress Creek Lumber Co., Pierce & Rhine, Mgrs., will build plant to manufacture lumber, shingles, laths, etc.; include sawmill with daily capacity 40,000 ft. lumber; has site on creek and railway. (Lately reported as Pompano Lumber Co.)

Fla., Tampa.—Denton-Shore Lumber Co. inceptd. with \$50,000 capital; S. B. Denton, Pres.; Philip Shore, V.-P.; P. P. Culbreath, Jr., Secy.

Ga., Commerce.—Cook-West Lumber Co., capital \$34,000, inceptd. by J. W. Cook and Martha B. West.

La., Lake Charles.—Channel Fence Co. will rebuild mill destroyed by hurricane.

La., Lake Charles.—Stout Lumber Co. will rebuild mill destroyed by hurricane.

La., Lake Charles.—Hodge Fence Co. will rebuild mill reported destroyed by hurricane.

La., Lake Charles.—Bell Lumber Co. will rebuild mill destroyed by hurricane.

La., Lake Charles.—Powell Lumber Co. will rebuild mill destroyed by hurricane.

La., Lockport.—Lock-Moore Lumber Co. will rebuild mill reported burned at \$200,000 loss.

La., Westlake.—Krause & Mangan Lumber Co. will rebuild mill destroyed by hurricane; loss reported as \$150,000.

Ark., Fort Smith, lately noted inceptd., \$100,000 capital. (See Machinery Wanted—Drill.)

Ga., Tifton—Peat.—W. S. Cobb will mine 38-acre peat bog; use for fertilizer manufacturing.

Okla., Hooker—Lead and Zinc.—Panhandle Lead & Zinc Co. chartered with \$40,000 capital by C. W. Duncan and others.

Okla., Okmulgee.—Okmulgee Mining & Milling Co., capital \$100,000, inceptd. by E. W. Cowden and others.

Va., Claremont—Marl.—Claremont Marl Products Co. organized; H. J. Arrington, Pres.; Jas. V. Trehy, V.-P.; G. P. Peed, Secy.; offices, 424 Dickson Bldg., Norfolk; in March noted inceptd. with \$250,000 capital; planning 408-acre marl development; install electric generators, pumps, engines, etc.; Richard K. Meade & Co., Engrs., Law Bldg., Baltimore, Md. (See Machinery Wanted—Engines; Rope; Rollers; Pump; Pipe; Rails; Generator.)

MISCELLANEOUS CONSTRUCTION

Ark., Chicot County—Levee.—Comms. Tensas Basin Levee Dist., H. A. Mangham, Secy., will construct levee, Chicot County; Leland levee, riverside enlargement, 150,000 cu. yds.; bids until Aug. 26 at office Board State Engrs., 213 New Orleans Court Bldg.

THE OFFICIAL PROPOSAL ADVERTISEMENTS

Appear This Week On Page 88

Notices of bond sales, construction and improvement contracts to be let, equipment and supplies to be purchased, franchises offered, etc., inserted in this department bring bids from the most important bond buyers, investors, financial institutions, contractors, engineers, architects, manufacturers, and supply houses throughout the country.

Rate 25 cents per line per insertion.

The PROPOSAL department goes to press 5 P. M. Tuesday for the issue of the following Thursday. If you cannot mail advertisement in time for any particular issue, please wire copy by day letter.

Send for booklet of testimonial letters from public officials who have used the PROPOSAL department of the Manufacturers Record, for bond sales, construction work, etc.

N. C., East Wilmington.—Cockey Brothers, capital \$140,000, inceptd. by T. D. Cockey and others.

Tenn., Memphis.—Philip A. Ryan Lumber Co. increased capital from \$75,000 to \$125,000.

Va., Fredericksburg.—Dimension Lumber Co., 27 Law Bldg., chartered; capital \$50,000; Chas. D. Bunn, Pres.; Chas. F. Gaskill, Secy.-Treas.; S. T. Wakeman, V.-P., Brock Road, Va.

METAL-WORKING PLANTS

Ark., Fort Smith.—Scissors.—Solid Steel Scissors Co. will build addition; install machinery, increasing daily capacity from 200 to 250 dozen scissors.

Md., Baltimore.—Cans.—American Can Co., Maryland Trust Bldg., let contract to West Construction Co., 907 American Bldg., Baltimore, to erect 3-story, 105x76-ft. brick and concrete building, cost \$100,000, on Hudson St., near Boston; plans by N. M. Loney Co. (Supersedes recent statement.)

Mo., St. Louis.—Tin-foil.—Johnston Tin Foil & Metal Co., F. H. Penney, Mgr., 6030 S. Broadway, let contract to Murch Bros. Construction Co., Railway Exchange Bldg., to erect concrete-construction, 2-story and basement building, cost \$35,000; Archt., Chas. H. Deitering, Central National Bank Bldg.; all of St. Louis. (Lately noted.)

Va., Roanoke.—Metal Specialties.—Virginia Metal Mfg. Co. chartered; capital \$10,000; R. C. Phillips, Pres., Middletown, Ohio; P. W. Gregory, Secy., Roanoke.

MINING

Ala., Blanche.—Lead.—Blanche Lead & Mining Co., Gadsden, will develop 300 acres; capacity not decided; date for opening mining machinery bids not set. (Lately noted organized, \$5000 capital; S. W. Riddle, Pres.; J. J. Moore, Secy.-Treas.; optioned lead-ore property, Cherokee County.)

Ark., Mena.—Manganese.—Manganese Mining & Development Co. organized; S. B. Collins, Pres.; W. W. Dean, V.-P.; C. J. Colp, Box 93, Secy.-Treas.; S. F. Novotny, Mgr.; develop 320 acres; capacity not decided; now receiving mining machinery bids. Under

New Orleans, La. (See Machinery Wanted—Levee.)

Fla., Pensacola.—Bulkhead.—Bureau Yards and Docks, Navy Dept., Washington, D. C., will build bulkhead; cost \$10,000; bids until August 26; specifications, etc., on file. (See Machinery Wanted—Bulkhead Construction.)

Ky., Louisville.—Retaining Wall.—Jefferson County Comms. let contract to C. F. Fitch, 2729 Virginia St., Louisville, to construct retaining wall of concrete and steel; 400 ft. long; cost \$14,344.

Ky., Louisville.—Wharf Terminal.—Board Public Works contemplates construction of wharf terminal; 2-story, 60x200-ft. building; cost \$50,000.

La., East Carroll and Madison Parishes.—Board State Engrs., Frank M. Kerr, Ch. State Engr., 213 New Orleans Court Bldg., New Orleans, La., asks bids until Aug. 26 for following enlargement, riverside, Mississippi River, right bank: Salem levee, East Carroll parish, 200,000 cu. yds.; Cabin Teele levee, Madison parish, 160,000 cu. yds. (See Machinery Wanted—Levee.)

La., Iberville, St. John the Baptist and St. Charles Parishes.—Levee.—Louisiana State Engrs., Frank M. Kerr, Chief State Engr., 213 New Orleans Court Bldg., New Orleans, ask bids until Aug. 26 to construct levees: Palo Alto to Dunboyme levee, Iberville Parish, riverside enlargement, 130,000 cu. yds.; Bonnet Carré levee, parishes of St. John the Baptist and St. Charles, riverside enlargement and raising, 65,000 cu. yds. (See Machinery Wanted—Levee.)

La., New Orleans.—Industrial Canal.—Port Comms., John R. Loomis, Purchasing Officer, 833 Canal St., asks bids until August 27 to furnish and erect, on foundations furnished, lock gates and parts for ship lock under construction at entrance to Inner Harbor; Industrial Canal noted in May as follows: Port Comms. will build industrial canal; J. Devereux O'Reilly, Chief Engr., 200 New Orleans Court Bldg., advises Manufacturers Record: Construction of lock and canal by board's own forces; canal 5½ mi. long, with width of 150 ft. at bottom and 350 ft. at top; 25 ft. deep at mean low water; actual work begun May 5; probably complete by Dec. 31, 1919; estimated ultimate cost,

\$12,000,000; George W. Goethals & Co., 4 Wall St., Consit. Engrs., New York, to design lock and canal. (See Machinery Wanted—Lock Gates and Parts.)

Md., Baltimore.—Bulkhead Wharf.—Bureau Yards and Docks, Navy Department, Washington, let contract to Cummings Structural Concrete Co., 1209 Stephen Girard Bldg., Philadelphia, Pa., to build timber bulkhead wharf 550 ft. long; cost \$40,000. (Lately invited bids.)

Md., Baltimore.—Federal Pier, etc.—Bureau Department plans to construct several piers, warehouses, etc., with accompanying facilities on waterfront; agreed to purchase 56-acre site at foot of Key Highway for \$400,000.

Mo., St. Louis.—Municipal Dock.—City will build 880x40-ft. concrete dock and five 1000 ft. warehouses; day labor; needs include 15,000 cu. yds. gravel, 6000 cu. yds. sand and 18,000 bbls. cement. Address City Engr.

S. C., Charleston.—Fuel Depot.—Bureau Yards and Docks, Navy Department, Washington, let contract Charleston Engineering & Construction Co., 58 Broad St., Charleston, at \$162,342 to erect fuel depot.

Tex., Dallas.—Concrete Retaining Wall.—City contracts for retaining wall work include following: Walls 4 to 12 ft. high on Lemmon Ave. (3 blocks) and Travis St. (1 block), previously noted let to Klein Bros. Co., Dallas, at \$33,428.45; walls on Outer Springs Road, cost \$16,591.45, contract let to Klein Brothers; Maple Ave. contract not yet let; walls to have stucco outside finish; gutter on top; drain pipe from each house; woven wire fencing; stairs, landings, etc.

Va., Camp Humphreys.—Pier and Wharves War Department, Washington, D. C., plans construction of steel pier and wharves.

Va., Quantico.—Heating Plant.—Bureau Yards and Docks, Navy Department, Washington, D. C., will build heating plant estimated to cost \$45,000; bids until August 2; specifications (No. 3314), etc., on file. (See Machinery Wanted—Heating Plant.)

MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Electrical Specialties Domestic Electric Co. inceptd.; capital \$10,000; Wm. C. Knoph, Pres., Birmingham; F. K. Rungan, Secy., Atlanta, Ga.

Ark., Bentonville.—Hardware.—Bohart Hardware Co., capital \$35,000, inceptd. by E. C. Bohart, H. T. Chapman and Louis Haas.

Fla., Miami.—Dyeing, etc.—Howard Cleaning, Pressing & Dyeing Co., capital \$50,000, inceptd.; Geo. A. Howard, Pres.; W. W. Winton, Secy.

Fla., Orlando.—Publishing.—Florida Cracker Publishing Co. chartered; capital \$30,000; Fred De Berry, Pres.

Fla., Tampa.—Fishery.—Mirabella Fish Co. chartered; capital \$15,000; B. Mirabella, Pres.

Ga., Blackshear.—Potato Curing.—A. H. Moore, Pres., Pierce rading Co., is promoting erection of potato-curing plant.

Ga., Dublin.—Grain Elevator.—Farmers Co-operative Assn. of Laurens County will build grain elevator; plans not decided; address Chauncey Smith, Special Agent Southern Bell Telephone & Telegraph Co., Atlanta, Ga. (Mr. Smith lately noted as to build this elevator.)

Md., Baltimore.—Color Printing.—Maryland Color Printing Co., Holiday and Hillen Sts., will build plant addition; 6 stories; 150,000 sq. ft.; reinforced concrete; let contract to Consolidated Engineering Co., 243 Calvert Bldg., Baltimore.

N. C., Lake Junaluska.—Construction.—Junaluska Construction Co. chartered by J. Dale Stentz of Lake Junaluska, J. B. Frey of Charlotte, N. C., and Jno. R. Pepper of Memphis, Tenn.; capital \$25,000.

Okla., Tulsa.—Water Bottling.—Eureka Spring Water Co., capital \$10,000, inceptd. by Giles A. Penick, W. C. Dechert and H. C. Williams.

S. C., Camp Wadsworth.—Laundry.—War Dept., Washington, will erect laundry at Camp Wadsworth near Spartanburg; cost of building and machinery \$176,000; J. D. Koop, Constructing Quartermaster, Camp Wadsworth.

S. C., Charleston.—Laundry.—Dunbar Laundry, E. F. Benfield, Mgr., will add new machinery to include dry-cleaning equipment.

S. C., Charleston.—Pressing Plant.—Economy Pressing Co., capital \$2000, inceptd. by Wm. Heyward and Chas. A. Bense.

S. C., Charleston.—Sign Painting.—Miller Auto & Sign Painting Co., 40 Westworth St., chartered; Wm. Heyward, Pres.; E. L.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

N. C., Fayetteville.—Cumberland County Commrs. plan to build highway to cantonment.

N. C., Wilmington.—City will pave with brick, 4 blocks on Greenfield and Front Sts. by force account; also pave 6 blocks, 9000 sq. yds. on Water and Nutt Sts., with vitrified brick on concrete base; will ask bids for latter work; J. Newton Johnston, City Engr.

S. C., Greenville.—War Department will expend \$150,000 to improve roads.

S. C., McCormick.—McCormick County Commrs. let contracts for grading and construction of drainage structures on 11 mi. McCormick Parkville Road; Section 1, 3 mi., to R. H. Wright of McCormick, at \$3253, and Section 2, 8 mi., to W. R. Johnstone of Plum Branch, S. C., at \$15,923; involves 48,000 cu. yds. excavation, 1350 lin. ft. pipe culverts and 84 cu. yds. concrete. M. E. Worrell, County Highway Engr., McCormick.

Tenn., Bristol.—City, S. G. Keller, Commr. Public Improvements, will construct 15,000 yds. asphalt streets and 4000 yds. relaid brick streets; \$50,000 available; open bids about Sept. 1 for asphalt construction; city force to do brick work and furnish material. Lately noted. (See Machinery Wanted—Paving.)

Tenn., Jackson.—Solomon Construction Co., Harrison, Tenn., has contract to grade 15 mi. highway.

Tex., Brownwood.—Brown County Commrs. plan election on \$50,000 bonds for constructing oil-belt highway throughout Blanket Road Dist.

Tex., Cisco.—City let contract to Municipal Paving Co., Dallas, at \$32,700 to construct 15,000 sq. yds. 3 in. brick pavers on 4-in. concrete base and 1-in. sand cushion. (Lately noted inviting bids.)

Tex., Colorado.—S. E. Brown, Loraline, Tex., has \$20,000 contract for concrete road construction.

Tex., Orange.—City contemplates construction of 30 blocks asphalt or concrete streets. Address The Mayor.

Tex., Waco.—McLennon County Commrs. let contract at \$26,650 for grading, graveling, asphalt topping and bridging 3½ mi. of Waco-Marlin Road, State Highway No. 2. (Lately noted inviting bids.)

Va., Abingdon.—Washington County will construct 3600 lin. ft. water-bound macadam road, between Bristol and Abingdon; receive bids until August 19 at office of Division Engr., A. H. Pettigrew, Bristol, Va., from whom plans and specifications are obtainable.

Va., Richmond.—City appropriated \$35,000 for paving to Government boiler-plate plant. Address City Engineer.

SEWER CONSTRUCTION

Fla., Daytona Beach.—City Council, R. L. Selden, City Clerk, asks bids for Sept. 3 on sewer construction in connection with paving; includes 2200 lin. ft. 18-in. drain pipe, 1000 lin. ft. 15-in. and 1600 ft. 12-in. sewer pipe, 2000 lin. ft. 4-in. house connections; 15 manholes; 400 lin. ft. 10-in. drain pipe, 20 catch-basins. (See Machinery Wanted—Sewers; Paving, etc.)

Fla., Labelle.—C. W. Shaefer and others, Cleveland, O., are reported to build sewer system. (See Land Developments.)

Fla., Miami.—City let contract J. J. Quinn Co., Miami, at \$27,660 to construct sewer in Highland Park; 13,000 lin. ft. 8 to 18-in. pipe, 35 manholes, etc.

Ga., Thomson.—City voted \$21,000 bonds for sewer construction. Address The Mayor.

Ky., Paris.—City let contract to D. A. Sant, Cincinnati, Ohio, to construct 2 mi. sewers. (Lately noted inviting bids.)

La., Oakdale.—City engaged X. A. Kramer, Magnolia, Miss., to prepare designs and estimates for sanitary sewer system, cost \$30,000.

Miss., Hattiesburg.—City, J. H. Putnam, City Engr., will extend sewers; 6 and 8-in. pipe; cost \$5000; no contracts; construction by city convict force.

Okla., Duncan.—City proposes sewer construction; Benham Engineering Co., Engr., Oklahoma City.

Tex., Dallas.—City let contract to Klein Bros. Co., Dallas, to construct storm sewers on Lemon Ave. and Leonard St.; cost \$20,000.

Tex., El Paso.—City let contract Winslett & Eldridge Co., Dallas, at \$52,388, to construct sewer system and disposal plant. (Lately noted inviting bids, etc.; Henry E. Elrod, Engr., 505 Interurban Bldg., Dallas.)

SHIPBUILDING PLANTS

Fla., Jacksonville.—Steel Steamships.—Brittain Shipbuilding Co., capital \$1,000,000, inceptd.; E. T. Terry, Pres.; S. L. Weller, V.-P.; J. W. Hollister, Secy.-Treas.

Fla., Jacksonville.—Steel Steamships.—Jacksonville Dry Docks & Repair Co., capital \$750,000, inceptd.; E. F. Terry, Pres.; S. L. Waller, V.-P.; J. W. Hollister, Secy.-Treas.

Md., Baltimore.—Steel Steamships.—Union Shipbuilding Co., Philadelphia, Pa., will build shipyard for steel cargo vessels; construct 8 ways for 550-ft. ships; purchased 60-acre waterfront site.

Md., Baltimore.—Drydocks.—Emergency Fleet Corporation, S. G. Jenks, Dist. Officer, plans to build or finance building of 2 floating drydocks for small wooden and steel steamships.

TEXTILE MILLS

Ala., Demopolis.—Bleaching Plant.—Demopolis Fiber Co. organized; I. F. McLean, Pres.; E. B. Barnes, V.-P.; S. N. Owens, Secy.-Treas.; D. Coker, Engr.-Archit., Demopolis; has machinery (cost \$12,000) in brick building of Alabama Lumber & Supply Co., using power from latter's plant; belt drive; bleach filters for nitrating; daily capacity 10,000 lbs. (Lately noted inceptd., \$20,000 capital.)

Ga., Atlanta.—Cotton Yarn, etc.—Dixie Mfg. Co. will add 2000 spindles.

N. C., Durham.—Hosiery.—Paragon Hosiery Mills chartered by H. E. Perry, W. J. Christian and J. C. Wynne.

N. C., Durham.—Hosiery.—North State Knitting Mills will increase capital to \$100,500; reported to build additional mill.

N. C., Stony Point.—Cotton Products.—Stony Point Mfg. Co. increased capital to \$250,000.

N. C., Gastonia.—Cotton Products.—Ranlo Mfg. Co. increased capital to \$500,000.

S. C., Cheraw.—Knit Underwear.—Cheraw Underwear Co. organized; capital \$50,000; G. W. Duval, Pres.; Robert Chapman, V.-P. and Mgr.; J. O. Bailey, Secy.-Treas.; has 2-story 100x30-ft. brick building, costing \$10,500; install 22 knitting machines, 50 to 60 sewing machines, 25 H. P. electric-power plant, dyeing equipment, etc., costing \$35,000; daily capacity 100 dozen knit union suits. (See Machinery Wanted—Knitting Machines; Sewing Machines; Dyeing Equipment; Electric Plant.)

Tex., Dallas.—Trinity Products Co. will rebuild gun cotton factory reported burned at \$100,000 loss.

W. Va., Charleston.—Woolen Cloth.—A. S. Woolen Mill chartered by Jos. P. Murphy, Frank S. Murray and others, all of Philadelphia, Pa.; capital \$20,000.

W. Va., Parkersburg.—Silk Yarn.—Kahn & Feldman, 25 Madison Ave., New York, will install silk spinning and throwing machinery to cost \$100,000; ordered this equipment; has 3-story 304x54-ft. brick building erected at cost of \$50,000. (Previously noted to build plant.)

WATER-WORKS

Ark., Marianna.—City proposes installing boilers and accompanying equipment to furnish power for water pumping station. Address City Engineer.

Fla., Labelle.—C. W. Shaefer and others, Cleveland, O., are reported to build water-works. (See Land Developments.)

Md., Baltimore.—City purchased site for filtration plant additions; expend \$1,000,000 for headhouse, 2 coagulant basins, filters, filter water reservoir and alum plant; Walter E. Lee, City Water Engr.

Mo., Vandalia.—City contemplates voting on \$8000 to \$10,000 bonds to drill deep well water system. Address The Mayor.

N. C., Wilmington.—City plans additions to water-works; increase supply by 2,000,000 gals daily; drill deep wells; install machinery costing \$35,000; J. H. Sweeney, Chief Engr.

N. C., Wilmington.—City will appropriate \$35,000 to \$40,000 to improve water supply system; contemplates deep wells with turbine pumps, semi-Diesel oil engines, electric generators and motors; J. Newton Johnston, City Engr. (See Machinery Wanted—Pumps; Engines; Generators and Motors.)

Okla., Depew.—City plans issuing bonds for water-works improvements. Address City Engr.

Okla., Duncan.—City proposes water-works extensions; Benham Engineering Co., Engr., Oklahoma City.

Tex., Mt. Auburn.—City Commrs. contemplates laying water mains to cost \$12,000.

Va., Richmond.—City appropriated \$54,500 for improvements, piping, etc., to furnish water at Government boiler-plate plant, including \$7500 8-in. main. Address City Engr.

WOODWORKING PLANTS

Ala., New Decatur.—Stave.—Virginia Stave Mill Co. organized; Jesse Loney, Pres., Indian Rock, Va.; J. H. McNamara, V.-P.

Ark., Marmaduke.—Staves.—Vall Cooperage Co., Fort Wayne, Ind., will rebuild plant; double-knife stave mill; wooden frame; cost of building and machinery \$40,000; daily output 100,000 slack barrel staves. (Lately noted.)

Ky., Louisville.—Cooperage.—W. G. Dunnington will construct cooperage shop, warehouse and drying-room. (See Miscellaneous Factories.)

La., Lake Charles.—Cooperage.—Lake Charles Cooperage Co. will rebuild mill destroyed by hurricane.

Mo., Gideon.—Staves.—Gideon-Anderson Co. will rebuild stave mill reported burned.

N. C., Asheville.—Treenails.—Black Locust Treenail Co., capital \$20,000, inceptd. by David P. Ravenal, R. P. Harris and C. W. Graybeard.

Tenn., Mengelwood.—Boxes.—Mengel Box Co. will rebuild box factory reported burned at \$60,000 loss.

Va., Roanoke.—Gunstocks, etc.—Penrod Walnut & Veneer Co., W. S. Smith, Mgr., second floor 316 S. Jefferson St. (home office, Kansas City, Mo.), will build mill and sheds; construction by the company; install hand sawmill and small band scroll saws; manufacture gun stocks, 2000 daily capacity; open machinery bids Sept. 1. Lately noted. (See Machinery Wanted—Sawmill Equipment; Engine.)

FIRE DAMAGE

Ala., Anniston.—Ornamental Foundry Co.'s plant.

Ala., Troy.—Standard Chemical & Oil Co.'s phosphate building No. 2; loss \$200,000.

Ark., Helena.—Darnell Lumber Co.'s ice-house, offices, storage-room, stables and apartment-house; total loss \$10,000 to \$15,000.

Ark., Marianna.—Bank of Marianna, loss \$4000; Southwestern Telephone Co.'s building; Griffin-Newbern Co.'s building, loss \$40,000; Mixon-McIntock Co.'s building, loss \$35,000; Peoples' Bank building, owned by S. H. Crow, loss \$10,000; Elder building, loss \$7500; Arkansas Light & Power Co.'s building, loss \$41,000; Dinning Furniture Co.'s building, loss \$2000; Jarrat & Sons' Investment Co.'s building, loss \$2000; Nathan Furniture Co.'s building, loss \$49,000; Futral building, loss \$5000; Mississippi Cash Store, loss \$7500; Newman building, loss \$7500; Harris & Burke's building; Beasley Dry Goods Co.'s building; Potts Hardware Co.'s building.

Fla., Daytona.—Thad McMullen's residence.

Fla., Jacksonville.—S. B. Hubbard Hardware Co.'s store; loss \$75,000.

Ga., Atlanta.—J. H. Herliener & Co.'s cotton-oil waste factory; loss \$5000.

Ga., Macon.—Atlantic Ice & Coal Corporation's cold-storage department on Waterville Road.

Ga., Quitman.—Robert Moore's store; A. B. Jones' warehouse; loss \$5000.

Ky., Hardinsburg.—Tobacco warehouse, occupied in part by D. H. Smith and James Jones; loss with contents about \$40,000.

La., Lockport.—Lock-Moore Lumber Co.'s mill; loss \$200,000.

La., New Orleans.—Dwellings of L. A. Chambers and Wm. M. Ross; loss \$11,800.

Md., Hurlock.—Guy Trice's residence, 2 mi. from Hurlock.

Miss., Greenville.—E. J. Bogen's residence; loss \$5000.

Mo., Excelsior Springs.—Hollins blackings and contents.

Mo., Gideon.—Gideon-Anderson Co.'s stave mill.

Mo., Kansas City.—Kellogg building, owned by S. B. Kellogg; loss \$30,000.

Mo., Kennett.—L. P. Tatum's building.

N. C., Bessemer City.—R. F. Coble's moving-picture theater; H. D. George's store; John Thomas' candy kitchen; A. M. Cramer's restaurant; loss \$10,000.

N. C., Charlotte.—Barrow Motor Truck Co.'s sales store; loss \$10,000.

N. C., Greensboro.—Blandwood Home, operated by Mrs. J. W. Brady; loss \$3000.

N. C., Lexington.—C. A. Hunt, Jr.'s residence; loss several thousand dollars.

N. C., Newbern.—Weldon Dennison's residence near Newbern.

N. C., Statesville.—Union Grove Methodist Church in Iredell County; loss \$200; Dr. Mr. McCollough, pastor.

N. C., Wilson.—Jonathan Bass' residence; loss \$5000.

S. C., Florence.—Howard Cannon's tobacco warehouse; loss \$20,000.

Tenn., Jackson.—Adams Hall at Union University; loss \$20,000.

Tenn., Mengelwood.—Mengel Box Co.'s factory; loss \$60,000.

Tex., Athens.—Mayfield Wholesale Grocery Co.'s building, loss \$10,000; plant of Athens Daily Review, owned by Craig & Barnes; loss \$8000.

Tex., Atlanta.—Atlanta Light & Ice Co.'s plants; loss \$70,000.

Tex., Beaumont.—Building owned by Goodhue Estate; loss \$10,000.

Tex., Caldwell.—Martin Weiderhold's residence, 4 mi. from Caldwell; loss \$3000.

Tex., Dallas.—Trinity Products Co.'s gun cotton factory; loss \$100,000.

Tex., Dallas.—Boatman Hardware Co.'s store; Sherwin-Williams Paint Co.'s store, owned by A. Furche Estate; estimated loss \$175,000.

Tex., Dallas.—Webster Grocery Co.'s building, owned by Mrs. W. C. Connolly; estimated loss \$250,000.

Tex., Fort Worth.—L. R. Thompson's residence, owned by H. M. Taylor.

Tex., Fort Worth.—S. L. Wilson's residence; loss \$3700.

Tex., Fort Worth.—Grandstand at Panther Park, owned by Frank M. Weaver; loss \$25,000.

Tex., Hillsboro.—Three buildings of Peabody School; loss \$6000.

Tex., Stamford.—Dwellings of A. M. Penell and R. P. Walker; total loss \$500.

Tex., Temple.—Monroe Isom's residence, owned by Mrs. Ed. Kelly, Somerville, Tex.; loss \$2000.

Tex., Waco.—Grandstand at Cotton Palace racetrack; loss \$10,000.

Tex., Wharton.—W. B. Barlee's store building.

Va., Ocean View.—Amusement pavilion leased by Wells Amusement Corporation, Otto Wells, Pres. and Gen. Mgr., Norfolk; estimated loss \$150,000.

Va., Norfolk.—Mayes & Jenkins' store, loss \$30,000; Dixie Furniture Co.'s store; Ben Taylor Co.'s building; Kelly Rooming House; Longshoremen Restaurant; Ferrat Hardware Co.'s store; total loss \$100,000.

W. Va., Charlottesville.—Rev. W. R. McElroy's residence on University Heights; loss \$7500.

W. Va., Garrardstown.—Turner Pitts' barn near Garrardstown; loss several thousand dollars.

W. Va., Mullens.—Mullens Hardware & Furniture Co.'s store; Bell & Mays' store; Bank of Wyoming; C. E. Lowe's grocery store and 2 poolrooms; reported loss \$75,000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—John W. Lewis, 2004 11th St., has plans by I. T. Hatton, 506 5th St. N. W., Washington, for apartment-house, 1829 13th St. N. W.; cost \$105,000.

Tex., Fort Worth.—L. L. Burton will erect apartment-house on 8th Ave.; roof garden.

Va., Alexandria.—A. S. Dunlaphan, Columbia Ave. and King Sts., will repair apartment-house; 4 stories; cost \$35,000; Oscar Vogt, Archt., Home Life Bldg., Washington, D. C.

Va., Norfolk.—K. E. Moore, 400 W. 14th St., will erect 3-family apartment-house; 2½ stories; 15x32 ft.; cost \$8000.

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August 22, 1918.]

ASSOCIATION AND FRATERNAL

Fla., Pensacola.—American Red Cross Assn., Washington, D. C., will erect building for naval air station; Major W. K. Hyer, Chaplain, Pensacola Chapter Red Cross.

Md., Baltimore.—American Red Cross Assn., Washington, will erect building on lot adjoining Union Station for soldiers and sailors; Horatio L. Whitridge, Secy., Baltimore, Chapter of Red Cross, Druid Hill Ave. and Eutaw St.

Mo., Joplin.—Young Men's Christian Assn., J. K. Gravelle, Secy., receives bids about Sept. 1 to erect building; plans by Smith, J. & Lovitt, Finance Bldg., Kansas City, will be 100x120-ft. structure; reinforced concrete and brick; 4 stories and basement; seating capacity of about 200; open-air gymnasium on 3d floor; swimming pool 25x77 ft.; 27 lockers, Turkish bath, etc.; cost about \$150,000. (Previously noted.)

S. C., Charleston.—Loyal Order of Moose purchased Rodgers Mansion and will expend \$25,000 for improvements for club; remodel basement for poolrooms; first floor for reading-rooms, writing-room, parlor, game-rooms, reception-rooms, dining-room, kitchen, cigar stand and soda water fountain; second and third floors for dormitories; fourth for ballroom and lodgeroom; natatorium and swimming pool 30x50 ft. on first floor of accessory building; gymnasium and bowling alley on second; J. G. Isenhour, Dist. Deputy Supervisor, may be addressed.

S. C., Charleston.—Young Women's Christian Assn., Leland Moore, Chrmn., receives bids at office D. B. Hyer, Archt., People's Bldg., Charleston, until Sept. 4 to erect administration, recreation and dormitory building; 60x200 ft.; brick; 3 stories; tin roof; tile and maple floors; steam heat; electric lights; cost \$68,000. (Lately noted.)

S. C., Charleston.—Knights of Columbus will erect recreation hut.

Tex., Beaumont.—Order of Owls will erect clubhouse; contain writing-room, gymnasium, library, etc.; cost \$30,000 to \$40,000.

Va., Richmond.—R. W. Crane has permit to alter brick hall at 900 St. James St. for Council Independent Order of St. Luke; cost \$15,000.

W. Va., Charleston.—American Red Cross Assn., Washington, will erect headquarters building; construction by Joseph Brice of Charleston Construction Co.

BANK AND OFFICE

Ala., Sheffield.—Chamber of Commerce plans to erect \$30,000 building; J. C. Harris, Chrmn. Building Committee.

D. C., Washington.—Merchants' Bank has plans by B. Stanley Simmons, 306 Real Estate Trust Bldg., Washington, for lowering first floor to street, 1415 G St. N. W.; cost \$23,000.

Mo., Marshfield.—Citizens' Bank, Chas. F. Ellis, Cashier, has plans by J. L. Heckenlively, Landers Bldg., Springfield, Mo., for bank building; 1 story; 32x50 ft.; cost \$15,000.

N. C., Greensboro.—Southern Life & Trust Co. is having plans prepared by C. B. Keen, 128 Chestnut St., Philadelphia, for proposed office building; 2 stories; 50x120 ft.; brick; reinforced concrete floors; concrete foundation; estimated cost \$100,000.

S. C., Charleston.—Charleston Trust Co., E. H. Pringle, Jr., V.-P., organized and will erect temporary wooden building.

Tex., Cisco.—Cisco Banking Co. has plans by David S. Castle, Cisco and Abilene, Tex., for bank and office building; 25x100 ft.; 5 stories; fireproof; Barrett roofing; steam heat; electric wiring; high-speed electric elevator; contract let last of August—date not set. (Previously noted.)

CHURCHES

Fla., Fort Lauderdale.—Nazarine Church will erect building; frame; 25x50 ft.; W. Phillips, Fort Lauderdale, in charge of construction.

La., Algiers (Station A, New Orleans).—Algiers Methodist Church South, Rev. C. C. Wier, Pastor, will rebuild church previously noted damaged by fire; 87x87 ft.; brick; pine floors; will let contract to J. W. Lennox, Favrot & Livandais, Archts., New Orleans. Address A. C. King, M.D., 301 Vallette St.

N. C., Gastonia.—Shelby District Conference will erect parsonage; cost \$5000; J. L. Beal and R. G. Rankin, Gastonia, are interested. (Lately noted.)

N. C., Landis.—Reformed Church is having plans prepared by Charles C. Hook, Charlotte, N. C., for building 57x84 ft., including 2-story Sunday-school building; tapestry brick; Bedford stone trim; slate roof; fan system of heating and ventilating; rolling partitions; electric fixtures; O. L. Linn, Secy. of Board.

N. C., Shelby.—First Baptist Church is having plans prepared by Charles C. Hook, Charlotte, N. C., for building to include church proper and Sunday-school annex; drawings and specifications ready for estimates Sept. 1. Address C. C. Cobb, Chrmn.

Tex., Dallas.—Tyler Street Methodist Church will erect home; cost about \$50,000; C. Young, 918 Sunset Ave., Dallas, is interested.

CITY AND COUNTY

Fla., Arcadia.—City Hall.—Bond Trustees, J. G. King, Secy., received no bids to erect city hall to contain courtroom, mayor's office, public comfort-room, council-room, clerk's office, marshal's office and engineer's office, fire department and basement for jail; estimated cost \$17,000; will probably call for new bids. (Previously noted.)

Ga., Alma.—Jail and Courthouse.—Bacon County Commrs. will erect jail and courthouse; 2 stories; brick; cost \$30,000. Address J. B. Taylor, Chrmn. (Previously noted.)

Md., Baltimore.—Boathouses.—Board of Awards opened bids for inclosing and dividing arcade under Hanover Street bridge and otherwise equipping same for housing of Maryland Motor Boat Club, Ariel Rowing Club, Arundel Boat Club and Baltimore Corinthian Yacht Club; William A. Parr, 1521 E. North Ave., Baltimore, only bidder at \$46,500; deferred action until August 21; plans by Wm. W. Ensmart, 1192 Union Trust Bldg., Baltimore. (Lately noted.)

Mo., Aurora.—City Hall.—City has plans by J. L. Heckenlively, Landers Bldg., Springfield, Mo., for city hall; 2 stories and basement; 65x70 ft.; Ozark Electric Co., Aurora, has contract for electric wiring.

Mo., Bellefontaine.—Cottages.—Board of Public Service rejected bids to erect 3 cottages at Bellefontaine Farms; 2 stories; brick; tile roofs; two-thirds fireproof; hot-water heating plants in each building; cost \$61,000, exclusive of heating and plumbing; plumbing and drainage, \$12,000; heating, \$6000; L. R. Bowen, City Engr. (Lately noted.)

Mo., Joplin.—City Hall.—City is considering erecting city hall at 2d and Joplin Sts.; cost about \$85,500; S. B. Ashcraft, City Engr.

Mo., St. Louis.—Warehouses, etc.—City will erect 40x80-ft. concrete dock and five 80x160-ft. warehouses; construction by day labor; estimated cost \$200,000. Address The Mayor.

N. C., Southern Pines.—Municipal.—City will erect municipal building at East Broad St. and New Hampshire Ave.; will house fire apparatus, have room for Mayor, Commissioners and Clerk; install vault; tower 32 ft. high; will erect stable and storehouse in rear of building. Address The Mayor.

COURTHOUSES

Ga., Alma.—Bacon County Commrs. will erect jail and courthouse; cost \$30,000. (See City and County.)

Ky., Pineville.—Bell County votes Nov. 5 on \$75,000 bonds to erect courthouse to replace structure previously noted damaged by fire; plaster, wood and brick; tin roof; concrete floors; wiring; heating to cost about \$1500; E. N. Ingram, County Judge, Pineville.

DWELLINGS

Ark., Little Rock.—R. R. Sawyer will erect 1-story frame cottage; cost \$3000.

D. C., Washington.—L. C. Smith, 520 Butternut St., Tokens Park, D. C., will erect residence at 500 Aspen St. N. W.; 2 stories; hollow tile; cost \$5000.

D. C., Washington.—Elle Fabre, 2585 Wisconsin Ave. N. W., will erect residence; 2 stories; 22x38 ft.; cost \$4200; day labor.

D. C., Washington.—Boss & Phelps, 714 14th St. N. W., has plans by Claude N. Norton, 4820 Chappell Lane, Washington, for residence, 3750 Oliver St. N. W.; cost \$3000; construction by owners.

D. C., Washington.—H. R. Howerstein, 1314 F St. N. W., has plans by W. E. Potomac, Washington, for 4 dwellings, 1375-51 Potomac Ave. S. E.; cost \$10,000; construction by owner.

D. C., Washington.—Stone-Tex Corporation, J. Shaffer, Pres., 300 McGill Bldg., will erect 2 residences at 1125-29 1st St. S. E.; 2 stories; 18x22 ft.; 5 rooms and bath; reinforced unit concrete; gravel roof; mastic linoleum on concrete floors; hot-air heat; cost \$9000; construction by owner; C. W. Alger, Supt.; Titus de Bobula, Archt., New York.

Fla., Daytona Beach.—Mrs. Martha Smith will remodel library building for dwelling.

Fla., Labelle.—C. W. Shaefer and associates, Cleveland, O., are reported to expend \$500,000 to develop town of Palmhurst, on Coffee Mill Hammock, on upper Caloosahatchee River; plans include erection of number bungalows, hotel, golf course and clubhouse, telephone exchange, sink artesian well; provide lake, 950x300 ft.; construct 80-ft. boulevard, 50 mi. side-walks, pave 50-ft. streets, steel bridge across river, etc.

Fla., St. Petersburg.—G. Doering will erect dwelling; cost \$12,000.

Ga., Augusta.—W. R. Roberts indefinitely postponed erection of residence; plans by Thos. M. Campbell, Johnson Bldg., Augusta, call for brick and hollow-tile construction; 71x40 ft.; hardwood floors; promenade tile terrace and porch floors; tile bathrooms; cost \$15,000. (Previously noted.)

Ga., Savannah.—Union Society, W. F. McCauley, Pres., has plans by W. A. Chaffee, Savannah, for superintendent's home at Bethesda; 60x40 ft.; 2 stories; frame; metal roof; cost \$5000. (Lately noted.)

Md., Baltimore.—George Klein has plans by George Wessel, 614 N. Dukeland St., Baltimore, for eight 2-story dwellings at 2301-15 Baker St.; 14x46 ft.; cost about \$14,000.

Md., Baltimore.—Frank Novak Realty Co., Harford Road and Baltimore & Ohio R. R., has plans by Otto G. Simonson, Maryland Casualty Tower, Baltimore, for twenty-three 2-story brick dwellings, 1701-45 E. 25th St.; 18x34 ft.; cost \$46,000; construction by owner. (Lately noted.)

Md., Baltimore.—Acme Building Co., Equitable Bldg., has plans by J. K. Hubbard, 1742 Moreland Ave., Baltimore, for ten 2-story dwellings on west side of Reisterstown Road near Ullman Ave.; 21.5x36 ft.; cost \$18,000.

Md., Baltimore.—Edward L. Storck, Munsey Bldg., has plans by Jacob F. Gerwig, 1028 N. Fulton Ave., Baltimore, for seven 3-story dwellings on east side of Guilford Ave., between 31st and 32d Sts.; 23x35 ft.; ornamental brick; cost about \$21,400; construction by owner.

Md., Baltimore.—H. Webster Cooke has plans by J. C. Spedden, 2715 Harlem Ave., Baltimore, for 8 residences on west side of Greenmount Ave., Guilford; 2 stories; 24x40 ft.; cost about \$20,000.

Mo., Bellefontaine.—Board of Public Service rejected bids to erect 3 cottages at Bellefontaine Farms; L. R. Bowen, City Engr. (See City and County.)

Mo., Joplin.—Lew and George Bamlett, Royal Heights, will erect residence; 2 stories; 45x60 ft.; brick; cost \$3000; construction by day labor.

Mo., Kansas City.—Wells Construction Co. will erect 17 dwellings in Maryland Addition; cost \$4000 to \$5000 each.

Mo., Kansas City.—W. C. Tabb, 410 Dwight Bldg., will erect residence on Meadow Brook Farm, near Kansas City; 1 story and basement; 30x42 ft.; frame; shingle roof; cost \$5000; day labor; N. E. Peters, Archt., 910 E. 29th St., Kansas City.

Mo., Nevada.—H. R. Primmer, Buckner Bldg., Nevada, is preparing plans for \$6000 residence; stucco and hollow tile; 2 stories and basement; 37x26 ft.

Mo., Nevada.—S. C. Carter has plans by H. R. Primmer, Buckner Bldg., Nevada, for residence; 2 stories and basement; 41x43 ft.; hollow tile and stucco; asbestos shingle roof; wood floors; hot-water heat; indirect lighting; cost \$7500; bids opened Sept. 2. Address Archt.

Mo., St. Louis.—Florence Whitney will erect 2-story tenement; cost \$7500.

Mo., St. Louis.—Otto G. Koehnig will erect residence at 4656 W. Florissant Ave.; 32x46 ft.; brick; tile roof; reinforced concrete floors; hot-water heat; electric lighting; cost \$6000; plans and construction by owner.

N. C., Concord.—Chas. B. Wagoner is having plans prepared by Chas. C. Hook, Charlotte, N. C., for residence; frame; tiled bathrooms; modulating heating system; separate building for 2-car garage and servants' quarters.

Okla., Tulsa.—A. E. Steele, care of architect, is having plans prepared by T. L. West,

18 W. 4th St., Tulsa, for residence; 30x40 ft.; frame; Rex shingle roof; oak floors; cost \$7000; heating, \$250; construction by day labor.

S. C., Greenville.—Mrs. Evie McKinney Neves will erect \$4000 residence.

S. C., Greenville.—Mrs. H. B. Haynesworth will erect residence; cost \$4000.

Tex., Fort Worth.—Joe Goldgraver will erect 1-story frame dwelling; cost \$3600.

Tex., Fort Worth.—W. B. McComb will erect dwelling; 1 story; frame; cost \$2500.

Tex., Houston.—Ed. Waack will erect 6-room residence; cost \$4700.

Va., Norton.—Tom Dixon will erect 3 cottages on 5th St.

Va., Norfolk.—E. L. Hurst, 224 W. 38th St., will erect residence; 2½ stories; 18x32 ft.; cost \$6300; construction by owner.

W. Va., Fairmont.—C. H. Snyder, Professional Bldg., prepared plans for residence; 50x70 ft.; brick veneer; cost \$25,000.

W. Va., Parkersburg.—Frank R. Smith has plans by Howe Patton, Smith Bldg., Parkersburg, for duplex residence; 2 stories and basement; 60x30 ft.; brick; cost \$7000.

W. Va., South Charleston.—U. G. Young will erect about 20 additional residences; 6 to 8 rooms.

GOVERNMENT AND STATE

Ark., Little Rock.—Camp Additions.—Cantonment Division, War Department, Washington, will construct additions to Camp Pike, to include barracks, officers' quarters, mess hall, drill hall, hospital, etc., for depot brigade and isolation camp; also construct barracks and quarters for officers' training school; total cost \$4,000,000; construction in charge of Maj. Geo. F. Heustis, Asst. Camp Quartermaster.

Fla., Key West.—Test Sheds.—Bureau of Yards and Docks, Navy Department, Washington, C. W. Parks, Chief, will erect addition to test shed; cost \$2718.

Fla., St. Augustine.—Rest Station.—Bureau of Yards and Docks, Navy Department, Washington, C. W. Parks, Chief, will erect rest station.

Fla., Tampa.—Rest Station.—Bureau of Yards and Docks, Navy Department, Washington, C. W. Parks, Chief, will erect rest station; cost \$5300.

Ga., Atlanta.—Camp Extension.—War Department, Washington, will enlarge Camp Gordon; plans include barracks and quarters for officers' training school; estimated cost \$2,000,000.

Ky., West Point.—Hospital.—War Department, Washington, will erect 500-horse veterinary hospital at artillery training camp.

Md., Baltimore.—Warehouse.—War Department, Washington, purchased site at Key Highway and McComas St. and plans to erect several warehouses; Oscar F. Lackey of Quartermaster Department, Washington, may be addressed.

Md., Indian Head.—Postoffice.—Bureau of Yards and Docks, Navy Department, Washington, D. C., will erect postoffice building; bids received until August 19 (extended date); specification 3271; cost \$20,000. (Lately noted.)

Md., Indian Head.—Dwellings.—Bureau of Housing, Department of Labor, Otto M. Eldlitz, Director, Mills Bldg., Washington, is having plans prepared by Donn & Deming, 508 17th St., Washington, for dwellings, etc. (Previously noted.)

Miss., Hattiesburg.—Camp Additions.—Cantonment Division, War Department, Washington, will erect additions to Camp Shelby; estimated cost \$2,000,000; Col. F. B. Wheaton, Archt., 7th and B Sts., Washington, D. C.

S. C., Charleston.—Fuel Depot.—Bureau of Yards and Docks, Navy Department, Washington, opened bids to construct fuel depot; Charleston Engineering & Construction Co., 58 Broad St., is lowest bidder at \$162,342. (Lately noted.)

S. C., Paris Island.—Prisoners' Camp.—Bureau of Yards and Docks, Navy Department, Washington, receives bids until Sept. 3 (specification 3275) to erect extensions to naval prisoners' camp; estimated cost \$105,000.

Tex., San Antonio.—Barracks, Hospital, etc. War Department, Washington, D. C., is reported to enlarge Camp Travis and erect barracks and other buildings at Kelley Field; also erect hospital at balloon school at Camp John Wise.

Tex., San Antonio.—Storehouse.—War Department, Washington, will erect 2 addi-

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tional storehouses at San Antonio arsenal; cost \$140,000.

Va., Chincoteague—Storehouse.—Lighthouse Inspector, Baltimore, will construct retaining wall and improve storehouse at Chincoteague Lighthouse Reservation; bids opened August 15.

Va., Hampton Roads — Quartermaster School.—Bureau of Yards and Docks, Navy Dept., Washington, opened bids to erect quartermaster school at naval operating base; Wise Granite & Construction Co., Richmond, is lowest bidder at \$215,000. (Lately noted.)

Va., Hampton Roads—Storehouse, etc.—Bureau of Yards and Docks, Navy Department, Washington, opened bids to construct dispensary, dirigible storehouse and other additional construction; R. R. Richardson & Co., 407 Bank of Commerce Bldg., Norfolk, are lowest bidders at \$39,980. (Lately noted.)

Va., Norfolk — Dispensaries. — Bureau of Yards and Docks, Navy Department, Washington, opened bids to erect 4 dispensary buildings at naval training station at St. Helena; Newport Contracting & Engineering Co., Law Bldg., Newport News, is lowest bidder at \$85,288. (Lately noted.)

Va., Petersburg—Camp Extension.—War Department, Washington, will enlarge Camp Lee; plans call for barracks and quarters for officers' training school; estimated cost \$2,000,000.

HOSPITALS, SANITARiums, ETC.

Ark., Little Rock.—Cantonment Division, War Department, Washington, will erect additions to Camp Pike to include hospital, etc. (See Government and State.)

Fla., Key West.—Treasury Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., receives bids until Aug. 24 for tenthouses for U. S. Marine Hospital; specifications and drawings at office Custodian of the Station and office of Mr. Wetmore as above. (See Machinery Wanted—Tenthouses.)

Ky., West Point.—War Department, Washington, will erect 500-horse veterinary hospital at artillery training camp. (See Government and State.)

N. C., Fayetteville. — War Department, Washington, will construct artillery camp; plans include base hospital, etc. (See Government and State.)

S. C., Union.—Wallace Thomson Hospital Assn. plans to erect building; Emslie Nicholson, Chrmn., Board of Trustees of Union Hospital Assn., is interested.

Tex., San Antonio. — War Department, Washington, D. C., is reported to erect hospital building at Camp John Wise. (See Government and State.)

Va., Norfolk.—City, D. S. Shank, Mayor, rejected bids to erect series of hospital buildings near Rugby St.; will have plans revised by W. C. Taylor, Citizens' Bank Bldg., Norfolk, and call for new bids. (Lately noted.)

HOTELS

Fla., Key West.—Florida East Coast Ry., W. H. Beardsley, Pres., 26 Broadway, New York, is having plans prepared by John W. Ingie, 527 5th Ave., New York, for Key West Hotel; stucco exterior. (Previously noted.)

Fla., Labelle.—C. W. Shaefer and associates, Cleveland, O., are reported to expend \$500,000 to develop town of Palmhurst; plans include erection of hotel, etc. (See Dwellings.)

Fla., New Smyrna.—R. S. Horn, Chattanooga, Tenn., purchased Hotel Turnbull and will remodel.

Okla., Ardmore.—J. C. Mulkey receives bids through E. S. Boze, Archt., Ardmore Bldg., Ardmore, until Sept. 15 to erect proposed hotel; 3 stories; reinforced concrete, steel and brick; reinforced concrete floors; concrete foundation; cost about \$50,000.

MISCELLANEOUS

Fla., Labelle.—Clubhouse.—C. W. Shaefer and associates, Cleveland, O., are reported to expend \$300,000 to develop town of Palmhurst; plans include erection of clubhouse, etc. (See Dwellings.)

Fla., Gardenville.—Pavilion and Clubhouse, W. D. Davis, Tampa, will not rebuild pavilion and clubhouse damaged by fire as lately noted.

Ga., Columbus — Tearoom. — Joe Brown leased second floor of building at Broad and 11th Sts.; will remodel for Japanese tearoom.

Mo., St. Louis—Funeral Chapel.—C. Herman will expend \$2000 to alter funeral chapel.

Mo., St. Louis—Sheds.—C. Palmicane will erect two 1-story wagon sheds.

N. C., Wilmington.—Club.—War Camp Community Service, Roger Moor, Chrmn., will erect army-navy club building; frame; cost \$4000; Capt. Jas. B. Lynch and Lieut. Phillips, Archts., Fort Caswell, are preparing plans. (Lately noted.)

Tex., Dallas—Home.—Tyler Street Methodist Church will erect home; C. Young, Dallas, is interested. (See Churches.)

Tex., Fort Worth—Grandstand.—Frank M. Weaver will rebuild grandstand at Panther Park noted damaged by fire at loss of \$25,000.

Tex., Vernon—Clubhouse.—Vernon Country Club postponed erection of clubhouse; plans by Madole & Field, 1104 Republic Bldg., Kansas City, Mo., call for 1-story and basement; 50x60 ft.; frame and stucco; shingle roof; cost \$25,000. (Previously noted.)

Tex., Waco—Exhibition Buildings.—Texas Cotton Palace Association will rebuild grandstand, poultry building and roller coaster noted burned at loss of \$10,000.

Va., Ocean View—Amusement Pavilion.—Wells Amusement Co., Otto Wells, Pres., and Gen. Mgr., Norfolk, will probably rebuild amusement pavilion noted damaged by fire at loss of \$150,000.

RAILWAY STATIONS, SHEDS, ETC.

Ark., West Memphis.—Chicago Rock Island & Pacific Ry., C. A. Moore, Chief Engr., Chicago, will not erect depot as lately noted.

Ga., Cairo.—Atlantic Coast Line R. R., J. E. Willoughby, Chief Engr., Wilmington, N. C., will remodel and enlarge depot; build restrooms, express-room, 30x50-ft. addition to platform, etc.

Ky., Dawson Springs.—Illinois Central R. R., A. S. Baldwin, Chief Engr., 135 E. 11th Place, Chicago, is having plans prepared by D. F. McLaughlin, care of Illinois Central R. R., for freight and passenger station; 1 story; 34x192 ft.

Ky., West Point.—Railroad Comsn. authorized Missouri, Kansas & Texas Ry., F. Ringer, Chief Engr., Dallas, and San Antonio & Aransas Pass Ry., F. W. Bailey, Supt. M. W. Yoakum, Tex., to erect joint depot.

Miss., Clarksdale.—Illinois Central R. R., A. S. Baldwin, Chief Engr., Chicago, has plans by D. F. McLaughlin, care of Illinois Central R. R., for passenger station, boiler-house and freight-house.

Va., Roanoke.—Norfolk & Western Ry., J. E. Crawford, Chief Engr., Roanoke, will alter freight depot at first and second streets for Salvage Department.

SCHOOLS

Ala., Maxine (Rural Route 5, Quinton).—Jefferson County Board of Education has plans by D. O. Whildin, 500 Title Guarantee Bldg., Birmingham, for school; 4 rooms; frame; composition roof; wood floors; jack-oiled stoves; cost \$7000; date opening bids not set. (Lately noted.)

Ala., Tuscaloosa. — Jas. H. Foster, Secy. Board of Education, receives bids until Sept. 1 to erect 2-story and basement addition to high school building; 58x131 ft.; brick walls; unitary plumbing and low pressure steam-heating system to be installed by owner. (Previously noted.)

Ark., Little Rock.—Government disapproved bond issue and Little Rock School Board cancelled contract with W. F. Ault, Little Rock, to erect grade and junior high school building at Lee Ave. and Pine St.; plans by Thompson & Harding, Little Rock, call for 2 stories and basement; 60x200 ft.; brick walls; reinforced concrete floor slabs and roof; wood and tile floor surfaces; cost \$136,000. (Previously noted.)

Ark., North Little Rock.—School Board will erect school for pupils from Dixie Land, Rose City and Tie Plant districts; receiving bids.

Fla., Molino.—Board of Public Instruction, A. S. Edwards, Supt., will erect 1-room school 5½ mi. west of Molino; bids opened August 23. (See Fla., Pensacola.)

Fla., Pensacola.—Board of Public Instruction, A. S. Edwards, Supt., will erect two 1-room schools; one at Barrineau Park and one 5½ mi. west of Molino; bids opened August 20; plans and specifications at office Mr. Edwards as above; one building, 25x32 ft.; wood; shingle roof; cost \$1000; W. D. Willis, Archt., Pensacola. (Lately noted.)

Ga., Atlanta.—Board of Education will install part of heating systems for Spring Street, Oakland City and Moreland Schools which are being constructed under supervision of W. W. Lottspeich, Supervising Archt. for city schools; plans include radiators, steam pipes, etc.; install ventilating system later.

Ga., Tybee.—Board of Education will erect school building; 3 rooms; wood construction; cost about \$3000; Lee Roy Myers, Chrmn., Building Committee, Savannah.

Kan., Pratt.—Board of Education, J. F. Reynolds, Supt., has plans by W. E. Hulse & Co., Hutchinson, Kan., for school building; 180x90 ft.; wood joist construction; composition roof; yellow pine and concrete floors; vapor heat; electric lights; cost \$110,000. Address architects.

Ky., Georgetown.—Scott County Board of Education will erect school; Mary Bradley, County Supt.

La., Lake Charles.—Parish School Board will repair school building damaged by fire.

La., New Orleans.—City has plans by E. A. Christy, Chief Archt., Room 25, City Hall, for Delgado Central Trades School for Boys; 3 stories; part fireproof and part mill construction; slate and composition roof. (Lately noted.)

La., St. Bernard. — St. Bernard Parish, Clement Story, Supt. of Education, will repair public schools.

Miss., Ellisville.—Board of Supervisors of Jones County will issue \$22,000 bonds; \$15,000 for improvements to schools in Pandorf Separate School Dist.; \$3000 to erect and equip school buildings in Glade Consolidated School Dist.; \$4000 to erect, equip and repair schools and teacher's home in Johnson Consolidated School Dist.

Mo., Kansas City.—Board of Education has plans by C. A. Smith, Finance Bldg., Kansas City, for school; 1 story and basement; 40x40 ft.; cost \$8500; day work by boys from Industrial School.

Mo., Summerfield.—School Dist. No. 4 has plans by J. H. Felt & Co., Grand Avenue Temple, Kansas City, Mo., for school; 1 story; 25x32 ft.; cost \$2000.

Mo., St. Louis.—Woodriver District School Board will erect \$25,000 high school and \$10,000 grade school.

N. C., Dobson.—Graded School Dist. sold \$5000 bonds to erect and furnish school building; J. H. Allen, Clerk Surry County Board of Education, Elkin, N. C.

N. C., Paw Creek.—Paw Creek School Dist. No. 4 voted \$6000 bonds to erect school building; A. M. McDonald, Chrmn., Mecklenburg County Commrs., Charlotte, N. C. (Previously noted.)

Okla., Meeker.—Board of Education has plans by Bramblett & Huseman, Oklahoma Bldg., Oklahoma City, for proposed school; 1 story; 75x204 ft.; brick; cost \$50,000.

S. C., Columbia.—State Board of Correctional Administration receives bids at office J. Carroll Johnson, Archt., Palmetto Bldg., Columbia, until August 24 to erect State Industrial School for Girls, 8 mi. from Columbia; plans and specifications from same office; Ludlow & Peabody, 101 Park Ave., New York, and J. Carroll Johnson, Palmetto Bldg., Columbia, Archts. (Previously noted.)

Tenn., Harriman.—City voted \$13,000 funding bonds; defeated \$17,000 school bonds. (Lately noted.)

Tenn., Jackson.—Union University, H. E. Watters, Pres., will repair Adams Hall noted damaged by fire at loss of \$20,000.

Tenn., Knoxville.—University of Tennessee, Brown Ayres, Pres., will remodel Fulton building for dormitory and workshop to be used in connection with training of soldiers.

Tex., Belton.—Baylor College, J. C. Hardy, Pres., is installing 3-story sleeping porches; cost \$5000. (Lately noted.)

Tex., Lubbock.—Following school districts in Lubbock County voted bonds to erect schools: Dalon, \$8000; Caldwell, \$4500; Hardy, \$1600; Posey, \$2000; McClung, \$1500, and Ropes, \$15,000. Address District School Trustees.

Tex., Marshall.—Freedmen's Aid Society, 429 Plum St., Cincinnati, Ohio, will erect brick school building; cost about \$40,000.

Tex., Shallowater.—Shallowater School District will erect school building; bonds voted. Address District School Trustees.

Va., Richmond.—Richmond College, F. W. Boatwright, Pres., is remodeling brick building at Broad and Ryland Sts. for chemical and physical laboratory; cost \$5000; construction college force. (Lately noted.)

W. Va., Crab Orchard.—Board of Education Town District, M. R. Jennings, Secy., Beckley, W. Va., receives bids until August 27 to erect 2-room school building at Crab Orchard and 1-room addition to Appleton school building.

W. Va., Sophia.—Board of Education Town District, M. R. Jennings, Secy., Beckley, W. Va., receives bids until August 27 to erect 1-room addition to school. (See W. Va., Crab Orchard.)

W. Va., Triadelphia.—Triadelphia School Dist. defeated \$50,000 bond issue to erect high school. Address District School Trustees. (Lately noted.)

STORES

Ala., Birmingham.—Barber-Ramsay Drug Co. leased store at 4th Ave. and 2nd St. and will expend \$4000 to \$5000 for improvements, new front, etc.

Ala., Gadsden.—N. E. Ory will remodel store building.

Fla., Jacksonville.—H. F. McAden will repair building on West Bay St.; cost \$1000.

Fla., Miami.—A. R. Smart will remodel building at 11th and Court Sts. for 4 store rooms; cost \$15,000.

Ga., Augusta.—Haynie & Hillhouse have plans by Thos. M. Campbell, Johnson Bldg., Augusta, for milk depot; 37x120 ft.; brick; Carey roofing; cement floors; cost \$12,000; construction by day labor.

Ga., Columbus.—E. C. Grieshaber will repair store building; cost \$3000.

Ky., Paducah.—F. W. Woolworth Co. will office New York, will repair stores at 205 Broadway; construct 45-ft. show front; display windows and 2 street entrances; white metal ceiling; mahogany fixtures; electric lighting; heating, painting, etc.; cost \$5000; T. L. Holden, St. Louis, foreman in charge. (Lately noted.)

Md., Baltimore.—Leopold Sells, 6 N. Calvert St., has plans by Blanke & Zink, Equitable Bldg., Baltimore, for store at 126 W. Fayette St.

N. C., Gastonia.—A. M. and F. L. Sayers have plans by Chas. C. Wilson, Columbia S. C., to remodel store building; 50x60 ft.; ordinary construction; tin roof; wood floors; cost \$10,000; construction begins about Oct. 1; probably day labor. Address F. L. Sayers (Gastonia Hardware Co. lately noted to remodel building.)

Okla., Tulsa.—Hale-Halsell Grocery Co. will erect store building; 100x140 ft.; brick; cost \$30,000.

Tenn., Nashville.—Porter Clothing Co., J. J. Porter, Gen. Mgr., Birmingham, Ala., absorbed Huddleston-Cooper Co. at 5th Ave. and Church St. and will make improvements to building; remodel fronts on both streets; refurbish, etc.

Tex., Denton.—A. F. Evers will erect store building; about 40x40 ft.; frame; shingle roof; wood floors; cost \$11,000.

Va., Norfolk.—A. C. Hathway has plans by Benj. F. Mitchell, Seaboard Bank Bldg., Norfolk, for store building; 1 story; 40x40 ft.; brick and frame.

THEATERS

Fla., Daytona.—Bell-Carleton Co. will remodel Keating Casino; new floor, stage decorations, etc.

Fla., Fort Pierce.—Crystal Theater will repair and remodel theater.

WAREHOUSES

Ark., Bearden.—Cotton Belt Lumber Co. will rebuild feed warehouse lately noted burned; 32x80 ft.; wood frame; composition roof; 2-in. pine floors; cost \$2000; B. F. Goff, Supt. (See Machinery Wanted—Bollers.)

Ga., Macon.—Atlantic Ice & Coal Co. will rebuild storage building noted damaged by fire.

Mo., St. Louis.—City will erect five 100-ft. warehouses. (See City and County.)

Mo., St. Louis.—J. Necter Roller will erect 1-story warehouse; cost \$5000.

N. W., Wilmington. — Hanover Bond Warehouse Co. inceptd. with \$50,000 capital by S. M. Boatwright, J. Haughton James and J. F. Roache.

Okla., Tulsa.—Sinclair Oil Co. will erect warehouse; 40x75 ft.; partly 2 stories; provide offices for management of storage department.

S. C., Enoree.—Farmers' Warehouse Co. chartered with \$10,000 capital by Allen J.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Board of Education, Jennings, Mo., bids until August 27 to erect building at Clinton to replace old building. (See W. Va.)

Philadelphia School Board issue to erect new school building at 25th and Locust Sts. for 400 pupils. (See W. Va.)

McAdams will erect new building at 12th and Locust Sts. for 400 pupils. (See W. Va.)

Shaber will erect new building at 12th and Locust Sts. for 400 pupils. (See W. Va.)

F. L. Sargent, Columbia, Mo., bids to erect new building at 12th and Locust Sts. for 400 pupils. (See W. Va.)

Shing Co., B. Graham, Ala., bids to erect new building at 12th and Locust Sts. for 400 pupils. (See W. Va.)

as plans by Bank Bldg., 12th and Locust Sts. for 400 pupils. (See W. Va.)

Co. will erect new building at 12th and Locust Sts. for 400 pupils. (See W. Va.)

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Graham, Greenville, S. C., and J. Y. Bryson, Greenville, S. C., will erect warehouse, brick and concrete; 75x200 ft.; 3 stories; elevators, etc.; construction in charge of S. R. Ashworth, Graham.

Va., Richmond.—Warner Moore & Co. plan to rebuild warehouse lately reported burned at loss of \$50,000; details not determined.

below Rockville; cost \$25,000; construction begun.

Miss., Clarksdale.—J. M. Baber let contract to J. T. Skinner, Clarksdale, to erect residence in Oakhurst; 2 stories; frame.

Mo., Joplin.—Albert C. Jungo let contract to A. G. Greenwell to erect residence; 2 stories and basement; 7 rooms; cost \$12,000; let contract to Wenzel Roofing Co. for the roofing; W. C. Curbish for heating and plumbing; Globe Electric Co. for electric wiring.

Mo., St. Louis.—G. E. Stedman, 34 Westmoreland Place, has plans by Jas. Jamieson, Security Bldg., St. Louis, for alterations to residence; 3 stories; cost \$10,000; construction by owner; let following sub-contracts: Roofing, Geo. A. Riddle, Odd Fellows' Bldg.; plumbing, McLundie Company, 317 De Valliere St.; electric wiring, Koenigman Electric Co., 1420 Pine St.; all of St. Louis.

Va., Newport News.—Sam'l. R. Edwards let contract to R. M. Bradshaw, 629 26th St., Newport News, for residence; 2 stories; 25x48 ft.; cost \$7,000; let contract to Frank Rogh for plumbing; Nolan & Clifford, heating; both of Newport News; S. B. Chandler, Archt., First National Bank Bldg., Newport News. (Lately noted.)

Va., Norfolk.—J. R. Seaman, Berkley, Va., let contract to Logan McCloud, 1701 Colley St., Norfolk, for proposed bungalow; 2x30 ft.; cost \$10,000; Benj. F. Mitchell, Archt., Seaboard Bank Bldg., Norfolk.

GOVERNMENT AND STATE

D. C., Washington.—Storage.—War Department, Washington, let contract to Weller Construction Co., 816 14th St. N. W., Washington, to erect storage building at War College; Col. F. B. Wheaton, Adv. Archt., and M. B. Gunby, Adv. Engr., both at 7th and B Sts. S. W., Washington.

D. C., Washington.—Dormitories, etc.—Bureau of Industrial Housing and Transportation let contract to Richardson & Burgess, Inc., 12-13, 1413 H St. N. W., Washington, to erect 14 dormitories, mess hall and kitchen in Southeast Washington for navy-yard workers. (Lately noted.)

Ga., Augusta.—Camp Addition.—War Department, Washington, will expend several million to enlarge Camp Hancock; plans include barracks and quarters for officers' training school; accommodate 56,000 to 60,000 men; J. G. White & Co., 43 Exchange Place, New York, is reported to have contract.

Ky., Siltition.—Camp.—War Department, Washington, let contract to John Griffiths & Son Co., 112 W. Adams St., Chicago, to construct artillery camp; 400 buildings; wood construction; composition prepared roofing; wood floors; accommodate about 60,000 men; cost about \$15,000,000; Col. F. B. Wheaton, Adv. Archt., and Col. M. B. Gunby, Adv. Engr., both at 7th and B Sts. S. W., Washington. (Lately noted.)

N. C., Fayetteville.—Camp.—War Department will construct 6-brigade artillery camp, with remount station, quartermaster's depot, base hospital and general headquarters; accommodate 54,000; James Stewart & Co., 30 Church St., New York, is reported to have contract C. E. Pilat, Camp Engr. (Lately noted.)

Va., Hampton Roads.—Magazine Building.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., let contract to Williams-Gerstell, 159 Nassau St., New York, to erect magazine building at naval base; concrete and fireproof; asbestos roof; concrete or asphalt floors; concrete sidewalks; cost \$4733. (Lately noted.)

Va., Petersburg.—Camp Additions.—War Department, Washington, let contract to John T. Wilson Co., Inc., Mutual Bldg., Richmond, to erect additions to Camp Lee; cost \$6,000,000; Capt. Ira Hooks, Camp Constructing Quartermaster. (Lately noted.)

Va., Rosslyn.—Department of Agriculture.—Department of Agriculture, Office Chrmn. of Board of Awards, Washington, let contract at \$30,420 to Henry B. Davis, 813 14th St. N. W., Washington, to erect additions to building at Arlington Farm near Rosslyn. (Lately noted.)

HOSPITALS, SANITARIUMS, ETC.

La., Alexandria.—Central Contracting Co., Beatty Bldg., Houston, Tex., general contractor to erect hospital building for Louisiana Baptist Convention, let following sub-contracts: Plastering, J. H. Harrison; wiring, Stokes Electric Co., both of Shreveport, La.; reinforcing steel, O. J. Olesen, New Orleans; plumbing, Zoder Plumbing Co., Alexandria; painting, H. Herwager, Fayetteville, Ark.; millwork, Enoch Lumber Co., Jackson, Miss.; plans by Clarence W. King, Shreveport, call for 4 stories; fireproof; composition roof; concrete floors; cement finish; steam heat; cost \$65,000. (Previously noted.)

Orleans; plumbing, Zoder Plumbing Co., Alexandria; painting, H. Herwager, Fayetteville, Ark.; millwork, Enoch Lumber Co., Jackson, Miss.; plans by Clarence W. King, Shreveport, call for 4 stories; fireproof; composition roof; concrete floors; cement finish; steam heat; cost \$65,000. (Previously noted.)

MISCELLANEOUS

D. C., Washington.—Soda Fountain and Lunchroom.—P. O. Beyer let contract to Jas. L. Pains, Jr., Washington, to repair soda fountain and lunchroom, 1327 F St.; cost \$2500.

Ky., Louisville.—Club Building.—Louisville Women's City Club let contract to Lichtefeld, Metzner & Co., 981 Logan St., Louisville, to remodel club building; let following sub-contracts: Lutz & Schmidt, 2133 W. Main St., for masonry; F. A. Clegg & Co., 110 S. 1st St., heating; Gray & Tompert, 414 S. 1st St., plumbing; J. L. Strassell & Co., 445 S. 3d St., painting; all of Louisville; 2 stories; cost \$800; Loomis & Hartmann, Archts., 51 Todd Bldg., Louisville. (Previously noted.)

RAILWAY STATIONS, SHEDS, ETC.

Tex., Port Arthur.—Texarkana & Fort Smith Ry. Co., A. Leckie, Ch. Engr., Texarkana, Tex., let contract to McDaniel & Hartford, Port Arthur, to erect freight depot and warehouse to replace structure previously noted damaged by fire; 1 and 2 stories; 31x180 ft.; stucco on hollow tile; 5-ply tar and gravel roof; wood floor on fill. (Lately noted.)

SCHOOLS

Ala., Florence.—City let contract to J. H. Messelager, Memphis, Tenn., to erect 2 frame 2-story colonial style dormitories to accommodate about 75 girls to be used in connection with State Normal College; steam heat. (Lately noted.)

Mo., Kansas City.—Board of Education let contract to G. A. Harper, 6235 E. 13th St., Kansas City, to erect proposed open-air gymnasium; let contract to Western Roofing Co., 1513 Holmes St., Kansas City, for roofing; plans by C. A. Smith, Finance Bldg., Kansas City, call for 1 story; 50x122 ft.; cost \$8000.

Mo., Lamonte.—School Board let contract to C. A. Doty & Son, 2449 Askew Ave., Kansas City, Mo., to erect school building; 3 stories; 12 rooms; ordinary construction; face brick; composition roof; wood floors; gravity furnaces; cost \$18,500; Madorie & Field, Archts., 1105 Republic Bldg., Kansas City, Mo. (Lately noted.)

Mo., St. Louis.—School Board sublet contracts to erect school building at Clemens and Westgate Aves.; 70x100 ft.; fireproof; composition roof; reinforced concrete; steam heat; electric lighting; cost \$35,000; construction begun. Address J. Sidney Lee, Archt., 1225 Syndicate Trust Bldg., St. Louis. (Previously noted.)

Mo., St. Louis.—St. Louis Country Day School has plans by Jas. R. Jamieson, Security Bldg., St. Louis, and let contract to Jos. Godfrey & Co., Walnutwright Bldg., also of St. Louis, to erect school; also let contract to D. F. Edwards, 2628 Olive St., for heating; Koenigman Electric Co., 1420 Pine St., for electric wiring; both of St. Louis; cost \$8000.

N. C., Wilmington.—New Hanover County Board of Education let contract at \$31,000 to R. H. Brady, Wilmington, to erect addition to high school; 100x30 ft.; 3 stories and basement; 3 rooms; smoke-proof fire stair tower at each end of building; also remodel 4 rooms of present structure; new floors; provide cloak-rooms; install new lighting system and steam heating; H. E. Longley, Wilmington, has contract at \$1000 for heating; H. E. Bonitz, Archt., Wilmington. (Lately noted.)

Okla., Stillwater.—Board of Education let contract at \$56,850 to W. L. Campbell, 17 E. Robinson St., Oklahoma City, to erect high school building; 80x120 ft.; 3 stories.

W. Va., Quinimont.—Board of Education of Quinimont Dist. let contract to J. S. Fincher and P. L. Blair to erect school at Holly Coal Co., near Mangnet; 2 rooms; wood floors; cost \$2200; stoves, \$35; C. A. Fox, Pres. Board of Education, Crickmer, W. Va. (Previously noted.)

STORES

D. C., Washington.—Equitable Life Co. let contract to Sam'l. J. Prescott Co., 814 13th St. N. W., Washington, to repair storeroom,

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—Chesapeake & Potomac Telephone Co. let contract to Frank L. Wagner, 103 H St. N. W., Washington, for repairs to apartment-house, 1156 15th St. N. W.; cost \$120,000; McKenzie, Vookes & General, Archts.

Mo., Joplin.—O. H. Gentry let contract to Roy Hoffman, Joplin, to erect store and apartment building; cost \$40,000. (See Stores.)

Va., Norfolk.—M. D. White has plans by and let contract to Philip B. Moser, Law Bldg., Norfolk, to erect 2-family apartment-house; let contract to C. E. Bartlett for masonry; Jesse Johnson, Law Bldg., carpentry; Rapp & Mearing, 269 Bank St., plumbing and heating; Spann & Hill, 718 Granby St., roofing; E. T. Friend, 627 W. 31st St., painting; 2 stories; cost \$18,000. (Previously noted.)

Va., Norfolk.—Floyd Hurst let contract to E. D. Hebbis, 828 Grayden Ave., to erect apartment-house; let contract to Bohn Roofing Cornc Co., 129 Plume St., for roofing; A. W. Kemp, 135 Brooks Ave., plumbing and heating; Meeks-Reed Electric Co., 411 Granby St., electric work; H. C. Harding, 111 31st St., painting; 4 stories; cost \$60,000.

W. Va., Charleston.—V. J. Hartinger let contract to C. A. Peters, Charleston, to erect store and apartment building; cost \$10,000; G. W. Scofield, Archt., Charleston. (See Stores.)

ASSOCIATION AND FRATERNAL

Mo., Moberly.—West Park Methodist Episcopal Church let contract to Slater Brothers, Moberly, to erect building; 2 stories; gallery 600 ft.; ordinary construction; composition roof; wood floors; gravity furnaces; cost \$20,000; Madorie & Field, Archts., 1105 Republic Bldg., Kansas City, Mo. Address Rev. S. E. Hoover, Pastor. (Lately noted.)

Mo., St. Louis.—American Red Cross Assn., Washington, let contract to P. J. Moynihan, 316 Olive St., St. Louis, to erect building for convalescent-house; 90x70 ft.; wood; patent roof; cost \$19,000; steam heat, \$2200; La Beaume & Klein, Archts., Chemical Bldg., St. Louis. Address Contractor.

S. C., Greenville.—Jewish Welfare Board let contract to erect building at Camp Sevier; 2 stories; contain writing and reading-rooms, dormitories, shower baths, etc.; cost \$10,000.

S. C., Greenville.—Knights of Columbus let contract to Gallivan Building Co., Greenville, to erect hall No. 2 at Camp Sevier.

Va., Belvoir.—American Red Cross, 17th and D Sts. N. W., Washington, let contract to H. C. Ball, District National Bank Bldg., Washington, to erect convalescent home; cost \$22,000.

Va., Richmond.—American Red Cross, 17th and D Sts. N. W., Washington, let contract to H. C. Ball, District National Bank Bldg., Washington, to erect convalescent home; 2 stories; cost \$22,000. (Lately noted.)

BANK AND OFFICE

Ala., Florence.—First National Bank let contract to L. E. Tate, Florence, to erect bank building; grey brick, Tennessee marble and terra-cotta; composition roof; wood, concrete and tile floors; Broomell heating plant; Raydiant system of lighting; cost \$65,000; excavation completed; R. H. Hunt, Archt., Chattanooga, Tenn. (Previously noted.)

D. C., Washington.—Merchants' Bank let contract to R. P. Whitty & Co., Union Trust Bldg., Washington, to erect bank and office building; 5 stories; cost \$40,000; B. Stanley Simmons, Archt., Real Estate Trust Bldg., Washington.

Ga., Brunswick.—National Bank of Brunswick let contract to Georgia Showense Co., Montgomery, Ala., to enlarge and improve bank building; plans include entrance of Italian marble and grill doors and windows; side extending full length of building with offices on either side, basement for vaults, etc.

Mo., Pocomoke City.—Pocomoke City National Bank, Francis H. Wilson, Pres., will alter and erect addition to bank building; 1 story; cost \$25,000; let contract to John C.

Knipp & Sons, 218 Clay St., Baltimore, for painting; Owens & Sisco, Archts., Continental Bldg., Baltimore; construction by owner.

Mo., Weston.—Riley & Bro. Bank let contract to John T. Rader, Platte City, Mo., to remodel building for bank; ordinary construction; tile floors; gravity hot-air furnace; cost \$3200; Madorie & Field, Archts., 1105 Republic Bldg., Kansas City, Mo. (Lately noted.)

Okla., Shawnee.—Shawnee National Bank, H. T. Douglas, Pres., let contract to G. P. Carr, Shawnee, to erect bank and office building; 50x140 ft.; 2 stories and basement; Bedford stone; tar and gravel roof; reinforced concrete; Smith, Rea & Lovitt, Archts., 602 Finance Bldg., Kansas City, Mo. (Lately noted.)

Va., Norfolk.—Lowenberg Goodman Corp. let contract to Jesse Johnson, Law Bldg., Norfolk, to erect store and office building; cost \$25,000; Peebles & Ferguson, Archts., Law Bldg., Norfolk. (See Stores.)

Va., Petersburg.—Virginia National Bank, B. B. Jones, Pres., has plans by and let contract to P. A. Bishop, Sycamore St., Petersburg, to alter interior of bank; 2 stories; cost \$15,000. (Lately noted.)

Va., Staunton.—Augusta County Commrs. let contract to G. W. Fretwell, Staunton, to remodel old county telephone building for office building; cost \$3200 to \$3300. (See City and County.)

CITY AND COUNTY

Md., Baltimore.—Animal-house.—Board of Awards let contract at \$4500 to Home Cement Co., 2303 Maryland Ave., Baltimore, to construct animal-house in Druid Hill Park to replace structure damaged by fire. (Lately noted.)

Mo., Brookfield.—Library.—Carnegie Library Committee let contract to D. C. Boyd, Kansas City, Mo., to erect library; 58x35 ft.; 2 stories; ordinary construction; Tylike shingle roof; pine floors; hot-air furnace; cost \$12,000; Madorie & Field, Archts., 1105 Republic Bldg., Kansas City, Mo. Address Mrs. R. N. Bowdin, Chrmn. (Previously noted.)

Va., Staunton.—Office Building.—Augusta County Commrs. let contract to G. W. Fretwell, Staunton, to remodel old county telephone building for office building; new floors; rooms divided by glass partitions, new stairways, additional windows; cost \$3200 to \$3300. (Lately noted.)

DWELLINGS

D. C., Washington.—Louis Titus let contract to W. P. Lipscomb Co., Washington, to remodel 4-story residence, 175 N St. N. W.; enlarge dining-room, rearrange bedroom, 2 new baths, install electric lighting, etc.; cost \$500; Waggaman & Roy, Archts., 1211 Connecticut Ave. N. W., Washington.

Fla., Daytona.—Mrs. H. Y. Stillman let contract to U. H. Whipple, Daytona, to remodel dwelling.

Fla., Jacksonville.—Julian Paul, 301 Bisbee Bldg., has plans by and let contract to Henry Taylor & Son, 2825 Oak St., Jacksonville, to erect residence; 38½x36 ft.; frame; asphalt shingle roof; wood floors; city lights; cost \$4000.

Fla., Miami.—J. B. Wofford will erect dwelling; 32x66 ft.; asbestos shingle roof; oak floors; cost \$5000; construction begun; D. R. Adams, foreman. (Lately noted.)

Fla., Oldsmar.—Mrs. Mary A. Bolles let contract to Reolds Farms Co., Oldsmar, to erect dwelling; 40x40 ft.; frame; slate, shingle and composition roof; cost \$4000. (Wm. E. Bolles lately noted to erect this dwelling.)

Md., Etchison.—Thos. Hawkins let contract to Chas. Hawkins, Etchison, to erect bungalow; 2 stories; 25x40 ft.; cost \$5000.

Md., Kempton.—E. L. Baker let contract to Wm. Henderson to erect addition to dwelling; 2½ stories; 24x40 ft.; cost \$3000.

Md., Mount Airy.—Henry Nuszbaum let contract to Harvey Haines, Frederick, Md., to erect residence; 2½ stories; 30x30 ft.; cost \$7000.

Md., Rockville.—Harry V. Boule let contract to H. G. Howes, Rockville, to erect residence on Rockville Pike, about 3½ mi.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

818 14th St. N. W.; cost \$6000; A. P. Clarke, Jr., 706-09 Equitable Bldg., Washington.

D. C., Washington.—Parker Bridgett Co. let contract to C. A. Langley, 310 12th St. N. W., Washington, to alter store; changes in show windows, install electric lighting, etc.; 4 stories; cost \$20,000; F. D. Pyle, Archt., Evans Bldg., Washington.

Mo., Joplin.—O. H. Gentry let contract to Roy Hoffman, Joplin, to erect store and apartment building; cost \$40,000; let contract to Vulcanite Roofing Co., Kansas City, Mo., for roofing. (Previously noted.)

Mo., Kansas City.—Zahner Manufacturing Co. let contract to T. G. Schweiger Building Co., 1900 E. 16th St., Kansas City, to remodel store building; 3 stories and basement; cost \$3000.

Mo., Deepwater.—Deepwater School Dist., J. M. Woodward, Secy., let contract to A. T. Braun & Son, Monett, Mo., to erect high-school building; 55x55 ft.; one story and basement; building blocks and brick; composition roof; maple and concrete floors; cost \$11,000; steam heat, \$2700; electric lighting, \$175; J. H. Felt & Co., Archts., Kansas City, Mo. (Previously noted.)

Okl., Okmulgee.—Parkinson-Trent Mercantile Co. let contract to E. L. Winn Construction Co., Railway Exchange Bldg., Kansas City, Mo., to erect store building; 2 stories and basement; 60x100 ft.; brick, terra cotta and reinforced concrete; cost \$25,000; also let contract to McNeese & Davis, Okmulgee, for plumbing and heating; Smith, Rea & Lovitt, Archts., Finance Bldg., Kansas City, Mo. (Lately noted.)

Va., Norfolk.—Lowenberg Goodman Corp. let contract to Jesse Johnson, Law Bldg., Norfolk, to erect store and office building; 2 stories; 81x117 ft.; cost \$25,000; Peebles & Ferguson, Archts., Law Bldg., Norfolk.

W. Va., Charleston.—V. J. Hartinger let contract to C. A. Peters, Charleston, to erect store and apartment building; 2 stories; 32x46 ft.; cost \$10,000; G. W. Seefeld, Archt., Charleston.

THEATERS

Ga., Atlanta.—Marcus Loew, New York, let following contracts to remodel interior of Grand Theater: Mezzanine, orchestra floor and restrooms, Kruger Construction Co.; plumbing, tile and porcelain equipment, Belcher Plumbing & Heating Co.; pipe organ, to cost \$15,000, Frank Leatherman and E. S. Wilder; all of Atlanta. (Previously noted.)

Mo., Kansas City.—Idle Hour Theater let contract to Edelman & Fleming, Railway Exchange Bldg., Kansas City, to remodel moving picture theater; let contract to Galloway & Gelsa, 1433 Main St., Kansas City, for plumbing and heating; 1 story; cost \$10,000; Madorie & Field, Archts., Republic Bldg., Kansas City. (Lately noted.)

WAREHOUSES

D. C., Washington.—William Rogers Milling Co. has plans by and let contract to Deverell, Spencer & Co. to erect warehouse, 3261 K St. N. W.; cost \$50,000.

D. C., Washington.—War Department, Washington, let contract to Weller Construction Co., 816 14th St. N. W., Washington, to erect storage building at War College. (See Government and State.)

Fla., Jacksonville.—American Railway Express Co., W. K. Halle, Supt., has plans by and let contract to C. E. Hillyer, Blum Bldg., Jacksonville, to erect warehouse; 105x44 ft.; brick; Carey roofing; concrete floors; city electric lighting; cost \$9000. (Southern Express Co. lately noted to erect building.)

Ky., Louisville.—Drummond Manufacturing Co. let contract to C. A. Koener & Co., 318 E. Burnett St., Louisville, to erect warehouse; 1 story; 50x120 ft.; cost \$5000; also let contract to Central Paint & Roofing Co., 314 W. Main St., Louisville, for roofing; O. T. Ward, Archt., 1500 Lincoln Trust Bldg., Louisville. (Lately noted.)

Ky., Louisville.—Liggett & Myers let contract to C. A. Koener & Co., 318 E. Burnett St., Louisville, to remodel and erect addition to tobacco warehouse; 1 story; 200x30 ft.; cost \$12,000. (Lately noted.)

Md., Baltimore.—American Can Co. let contract to West Construction Co., American Bldg., Baltimore, to erect warehouse on Hudson St., near Boston St.; 3 stories; 105.3x76 ft.; brick and concrete; cost \$100,000; N. M. Loney, Archt.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

"WANTS"

Alcohol (Denaturing) Machinery.—John F. McNair, Laurinburg, N. C.—Data and prices on equipment for plant to manufacture denatured alcohol.

Belted.—Valley Forge & Mining Co., Bristol, Tenn.—Prices on second-hand canvas or rubber belt, 18 to 24 in.; be use if much worn.

Boiler.—J. W. Hoopes, Denbigh, Va.—Dealers' prices on 30 H. P. boiler for sawmill; for 100 lbs. pressure.

Boiler.—See Engine (Hoisting).

Bridge.—Port Commrs., John R. Loomis, Purchasing Officer, 833 Canal St., New Orleans, La.—Bids until August 27 to furnish and erect, on foundations furnished, 1 double track railway and highway, Strauss trunnion bascule bridges at sites of railway crossings, Inner Harbor Navigation Canal; specification, etc., at offices Geo. W. Goethals & Co., Engrs., 40 Wall St., New York, and Port Commrs.

Purchasing Officer. Washington.—Bids until Sept. 10 to furnish iron or steel cable, cast-iron water pipe, bolts, wire nails, screws, copper tacks, brass, bronze, copper, terne-plate, solder, fire extinguishers, platform scales, window glass, vitrified sewer pipe, harness and sole leather, brooms, oakum, rubber gaskets, flags, saddle pads, hammer handles, spar buoys, floor wax, borax, bicarbonate of soda, sal soda, graphite, red oxide of mercury, calcium chloride, barium sulphate, lampblack, ethyl alcohol, sperm oil, asphaltum, tar, pitch, asphalt, carbon bisulphide, ammonia, oxalic acid, white lead, white zinc, enamel, drier, copper paint, locomotive black, memorandum books and paper; blanks, etc. (Circular 1229) obtainable Panama Canal office or offices Asst. Purchasing Agents, 24 State St., New York; 606 Common St., New Orleans, and Fort Mason, San Francisco; also from United States Engr. offices in principal cities.

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ADDRESS: MANUFACTURERS RECORD, BALTIMORE, MD.

Bridge.—Virginia State Highway Commn., G. P. Coleman, Commr., Richmond, Va.—Bids until August 26 to construct reinforced concrete bridge across North Anna River, on Richmond-Washington Highway, between Hanover and Caroline counties; alternate bids received, State furnishing cement and reinforced steel f. o. b. railway point.

Boilers.—Cotton Belt Lumber Co., B. F. Gray, Supt., Bearden, Ark.—Prices on four 72-in. by 18 ft. 150-lb. working pressure boilers, complete with or without steel duct oven settings.

Bulkhead Construction.—Bureau Yards and Docks, Navy Department, Washington, D. C.—Bids until August 26 to build bulkhead estimated to cost \$10,000; specification, etc., on file.

Boilers.—Ross Power & Equipment Co., Indianapolis, Ind.—Dealers' prices on three 72-in. by 18 ft. H. R. T. boilers, butt strap, not less than 125 to 150 lbs.; two Heine, 250 lbs. and 100 lbs.; two 600 H. P., 175 to 200 lbs., or B. & W. type.

Brick-making Machinery.—Standard Brick Co., Charleston, W. Va.—Data and prices on truck for hauling brick; also on machinery for conveying brick from kiln to truck body; operate kilns of 30-ft. beehive type, with doorways 30-in. thick and 5 ft. 4 in. to 6 ft. high.

Cable (Iron or Steel), Pipe (Cast-Iron), etc.—Panama Canal, A. L. Flint, General

Canning Machinery.—Virginia Dare Hunt Club, Box 391, Wilmington, N. C.—Prices on machinery for canning oysters, shrimp and vegetables.

Cars (Mine).—Elkhorn & Jellico Coal Co., M. K. Marlowe, Mgr., Whitesburg, Ky.—Prices on mining cars.

Compressors (Air).—Holsam Company, 18 Broadway, New York.—Prices on air compressors, motor driven or belted; air pressure 100 to 150 lbs.; capacity 500 to 1000 cu. ft. per minute; send complete specification and place where inspection can be made.

Compressor (Air).—National Steel Products Co., R. S. Bohannon, Mgr., 1412 Jefferson County Bank Bldg., Birmingham, Ala.—Prices on air compressor; 300 to 500 cu. ft.; electric driven, 200 volts, 3 phase, A. C.

Confectionery (Chocolate).—Herbert J. Camacho, 137 Tower St., Kingston, Jamaica, B. W. I.—Addresses of manufacturers of chocolate confectionery. (See Hosiery, etc.)

Converter (Rotary).—Guyan Machine Shops, Logan, W. Va.—Dealers' prices on two 100 K. W. and one 200 K. W. rotary converters, 2200-volt, 3-phase, 60-cycle to 500 to 600 volts, D. C.

Conveyor.—Gager Lime & Mfg. Co., Chattanooga, Tenn.—Conveyor; pan type preferred; 300-ft. length by 20-in. width.

Conveying Systems.—See Brick-making Machinery.

Cotton and Woolen Goods.—See Hosiery, etc.—Herbert J. Camacho.

Detonators.—See Dynamite, etc., Panama Canal.

Dish-washing Machinery.—C. G. Vande Prest, Flora MacDonald College, Hot Springs, N. C., and Blowing Rock, N. C.—Prices on dish-washing machinery, capacity 300 persons; give date of delivery; electricity.

Ditcher and Excavator.—Easton Machinery Co., 602 Drake Bldg., Easton, Pa.—Dealers' prices on Keystone ditcher and excavator.

Drill (Hammer).—Manganese Mining & Development Co., Mena, Ark.—Prices on Jack-hammer drill.

Dyeing Equipment.—Cheraw Underwear Co., Robert Chapman, Mgr., Cheraw, S. C.—Dyeing equipment for knit union-suit mill.

Dynamite, etc.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Aug. 24 to furnish dynamite and detonators; blanks, etc. (Circular 1228), obtainable office's office and offices Asst. Purchasing Agents, 24 State St., New York; 606 Common St., New Orleans; also from United States Engr. offices in principal cities.

Electric Plant.—Cheraw Underwear Co., Robert Chapman, Mgr., Cheraw, S. C.—25 H. P. electric-power plant for knitting mill.

Electrical Equipment.—See Ice Machinery. (See Ice-cream Machinery.)

Elevator.—Bureau Yards and Docks, Navy Department, Washington, D. C.—Bids until August 26 to install elevator in storehouse, Norfolk; estimated cost \$100,000; specification (No. 3301), etc., on file.

Engines (Corliss; Hoisting).—Garland Peed, Treas., Claremont Marl Products Co., Box 887, Norfolk, Va., and Richard L. Meade & Co., Engrs., Law Bldg., Baltimore, Md.—Prices, stating location, facilities for inspection, etc., on 100 to 150 H. P. Corliss engine; also hoisting engine, single drum, double cylinder (no boiler), 20 to 25 H. P. new or second-hand.

Engines (Oil).—City of Wilmington, N. C., J. Newton Johnston, City Engr.—Prices on semi-Diesel oil engines.

Engines, etc.—J. W. Hoopes, Denbigh, Va.—Prices and specifications on new and second-hand following equipment (several hand preferred): 1000 ft. 3-in. iron pipe for 100 lbs. pressure; 900 ft. 3/4 wire hauling rope; 1000 ft. 20-lb. track, with fish plate and spikes; 20 to 25 H. P. hoisting engine, single drum, double cylinder; 5 K. W. D. C. or A. C. generator and switchboard with 6 leads, ammeter and voltmeter complete; state location; no telegrams desired.

Engines (Gasoline, etc.).—Southern Machinery Co., 407 Empire Bldg., Knoxville, Tenn.—Dealers' prices on 1 pair 4x6-in. or equivalent in horse power), double cylinder link-motion engine; also 30 to 40 H. P. or 4-cylinder gasoline engine, heavy duty.

Engine (Hoisting).—Penrod Walnut & Veneer Co., W. S. Smith, Mgr., second floor 316 S. Jefferson St., Roanoke, Va.—Prices on D. C. D. hoisting engine with boiler (See Sawmill Equipment.)

Flour (Potato) Mills.—Early & Goldie, 1218 Crown Hill Ave., Los Angeles, Cal.—Correspondence with manufacturers of potato-flour mill machinery.

Foundations, etc.—Bureau Yards and Docks, Navy Department, Washington, D. C.—Bids until August 26 for foundations and pipe-line conduits to cost \$10,500; these are for 2000-ton forging press.

Foundry (Steel) Equipment.—National Steel Products Co., R. S. Bohannon, Mgr., 1412 Jefferson County Bank Bldg., Birmingham, Ala.—Prices on four 150-lb. and four 200-lb. ladles (straight); six 100-lb. and eight 200-lb. welded taper ladles; three 1-ton geared ladles, bottom pour; steel grinding mill, 36x60; two double emery grinders; air compressor, 300 to 500 cu. ft., electric driven, 200 volts, 3-phase, A. C.; sand-grinding pan, single roll; two 100-gal. welded oil tanks; 1000-gal. pressure tank; small oil pump, 200 volts, 3-phase, A. C.; 2 Racine hack saws; 3 chipping hammers (air); portable core ovens; for installation Bessemer, Ala.

Generator (Electric).—J. W. Hoopes, Denbigh, Va.—Prices on 5 K. W. D. C. or A. C. generator and switchboard, with 6 leads, ammeter and voltmeter complete, new or second-hand. (See Engines, etc.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

See Brick-making
Goods.—See
Amite, etc., France
—C. G. Taylor
old College, New
machinery, capacity
of delivery: 100
—Easton Machine
—Stone ditcher and
—Ark.—Prices on
Cheraw Underwear
—Cheraw, N. C.—
it union suit mill
—Canaal, A. L.
—Officer, Washington
ing, 24 to 25 H. P.
blanks, etc. (See
—Officer's office and
Agents, 24 H. P.
—States Engr. office
Underwear
—Cheraw, N. C.—
Knitting mill
—See Ice Machine
inery.)
—Rds and Dock
—ington, D. C.—
install elevator
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c., on file.
—(Garland P. Feed,
Products Co.,
and Richard K. Meade &
Bldg., Baltimore,
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50 H. P. Cello
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20 to 25 H. P.
—ington, N. C.
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—Prices, Denbigh,
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switchboard
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and Walnut
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Va.—Price
with boiler
—Gallagher
—Los Angeles, Cal.
—Yards and Dock
—Washington, D.
—Foundation
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—National
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—Birmingham,
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es, etc.)

Generator (Electric).—Garland P. Feed, Treas. Claremont Marl Products Co., Box 887, Norfolk, Va., and Richard K. Meade & Co., Engrs., Law Bldg., Baltimore, Md.—On Engrs. stating location, inspection facilities, etc., on 5 K. W. generator (lighting system), either D. C. or A. C.

Generators and Motors (Electric).—City of Wilmington, N. C., J. Newton Johnston, City Engr.—Prices on electric generators and motors; for water-works.

Generators (Electric).—Ross Power & Equipment Co., Indianapolis, Ind.—Dealers' prices on generators: two 150 K. W., 60 volts; one 600 K. W., 480 volts; one 600 K. W., 600 volts; all 60-cycle, 3-phase; also non-condensing turbine, 750 K. V. A., 60-volt, 60-cycle, 3-phase, 100 lbs. steam, 10 lb. back pressure, or 1000 K. W. Bleeder type, steam condensing.

Generators (Electric).—Guyan Machine Shops, Logan, W. Va.—Dealers' prices on motor generators: Two 100 K. W. and one 250 K. W., 220-volt, 3-phase, 60-cycle, 50 to 600 volts, D. C.

Boilers.—D. Isbell, Guntersville, Ala.—Prices and styles on hot-air heating plant for 62,500 church building.

Boiling Plant.—Bureau Yards and Docks, Navy Department, Washington, D. C.—Bids until August 29 for heating system at Quantico, Va.; estimated to cost \$45,000; specifications (No. 3314), etc., on file.

Boilers (Steam; Electric).—Guyan Machine Shops, Logan, W. Va.—Dealers' prices on steam and electric boilers, 15 to 40 H. P.

Hosiery, etc.—Herbert J. Camacho, 137 Tower St., Kingston, Jamaica, B. W. I.—Addresses of manufacturers of hosiery, underwear, pajamas, shirts, collars, all kinds textile goods and chocolate confectionery; view to representation.

Ice-cream Machinery.—H. L. Harwood, 1032 Brambleton Ave., Norfolk, Va.—Prices on ice-cream machinery, daily capacity 50 to 75 gal.; electric power.

Ice Machinery.—S. E. Tillitt, Box 843, Norfolk, Va.—Prices on ice machinery, 1 to 10 tons daily capacity; for installation inside, suburban Norfolk.

Ice Machinery.—H. L. Harwood, 1032 Brambleton Ave., Norfolk, Va.—Prices on ice machine, 1 to 2 tons daily capacity; electric power.

Ice Machinery.—J. W. Hoopes, Denbigh, Va.—Dealers' prices on 1 to 5-ton ice machine and equipment, immediate shipment, f. o. b. cars; second-hand if good condition.

Ice Machinery.—J. Walter Hosler, care of Suffolk Cotton Gin & Grist Mill, Suffolk, Va.—Prices on new or second-hand equipment, including wagons, for proposed 30-ton ice plant.

Ice Machinery.—J. P. Wood, 1121 N. 31st St., Richmond, Va.—Data and prices on equipment for ice plant.

Ice Machinery.—United Cigarette Machine Co., Lynchburg, Va.—Prices on ice machine, small capacity.

Knitting Machines.—Cheraw Underwear Co., Robt. Chapman, Mgr., Cheraw, S. C.—22 knitting machines for union suits.

Laundry Machinery.—J. W. Marshall, Box 114, West Point, Va.—Prices on new or second-hand laundry equipment.

Levees.—Board State Engrs., Frank M. Kerr, Ch. State Engr., 213 New Orleans Court Bldg., New Orleans, La.—Bids until Aug. 26 on following enlargement, riverside, Mississippi River, right bank: Salem levee, East Carroll parish, 200,000 cu. yds.; Cabin Teale levee, Madison parish, 160,000 cu. yds.; further information obtainable office Board State Engrs.

Levees.—Board State Engrs., Frank M. Kerr, Ch. State Engr., 213 New Orleans Court Bldg., New Orleans, La.—Bids until Aug. 26 to construct following: Palo Alto to Dunboya levee, Iberville parish, Mississippi River, right bank, riverside enlargement, 120,000 cu. yds.; Bonnet Carré levee, parishes of St. John the Baptist and St. Charles, Mississippi River, left bank, riverside enlargement and raising, 65,000 cu. yds.; further information obtainable Board State Engrs.

Levees.—Comms. Tensas Basin Levee Dist., H. A. Mangham, Secy., at office Board State Engrs., 213 New Orleans Court Bldg., New Orleans, La.—Bids until Aug. 26 to construct Leland levee, Chicot county, Ark., Mississippi River, right bank, riverside enlargement, 150,000 cu. yds.; further information obtainable from Board State Engrs.

Lock Gates and Piers.—Port Comms., John R. Loomis, Purchasing Officer, 833

Canal St., New Orleans, La.—Bids until August 27 to furnish and erect, on foundations furnished, lock gates and fixed parts for ship lock under construction at entrance to Inner Harbor; specifications, etc., at office Geo. W. Goethals & Co., 40 Wall St., New York, and of Port Comms.

Machine-shop Equipment.—District of Columbia Comms., 511 District Bldg., Washington, D. C.—Bids until August 19 to furnish and install machine-shop equipment in New Central High School; specifications, etc., obtainable from Chief Clerk, Engr. Department, 427 District Bldg.

Manufactured Products.—Karel Croes, Aruba, A. H.—Correspondence with American manufacturers, view to representation.

Miscellaneous Equipment.—School Board, J. H. Johnson, Secy., Clarksdale, Miss.—Bids until August 28 on miscellaneous equipment for high school under construction; list and specifications at office H. B. Heidelberg, Supt. of Schools, Clarksdale.

Mixer (Concrete).—Gehr Construction Co., Alexandria, La.—Prices on steam concrete mixer, 1/2-yd. capacity, with hoister attachment.

Motors (Electric).—Penrod Walnut & Veneer Co., W. S. Smith, Mgr., second floor 316 S. Jefferson St., Roanoke, Va.—Prices on 100 H. P., two 25 H. P. and six 5 H. P. 3-phase 60-cycle A. C. motors. (See Sawmill Equipment.)

Motor (Electric).—Guyan Machine Shops, Logan, W. Va.—Dealers' prices on A. C. motor, 220-volt, 150 H. P., 3-phase, 60-cycle, 650 to 700 R. P. M.

Paving.—City of Bristol, Tenn., S. G. Keller, Commr. Public Improvements.—Open bids about Sept. 1 on 15,000 yds. asphalt street construction.

Paving, etc.—City Council, R. L. Seldon, City Clerk, Daytona Beach, Fla.—Bids Sept. 3 for grading and paving on Seabreeze, First, Silver Beach and North Atlantic Aves.; also furnishing and installing drainage system and sewer pipe; 14,000 sq. yds. pavement; 2000 cu. yds. excavation; 8000 lin. ft. concrete curbing; 2200 lin. ft. 18-in. drain pipe; 1000 lin. ft. 15-in. and 1600 ft. 12-in. sewer pipe; 2000 lin. ft. 4-in. house connections; 15 manholes; 400 lin. ft. 10-in. drain pipe; 20 catch basins; bids received for brick, asphaltic concrete and concrete surface construction; plans and specifications on file.

Pipe (Iron).—Garland P. Feed, Treas. Claremont Marl Products Co., Box 887, Norfolk, Va., and Richard K. Meade & Co., Engrs., Law Bldg., Baltimore, Md.—Prices, stating location, inspection facilities, etc., on 1000 or less 3-in. iron pipe, 100 pounds pressure; new or second-hand.

Pipe (Iron).—J. W. Hoopes, Denbigh, Va.—Prices on 1000 ft. 3-in. iron pipe for 100 lbs. pressure; new or second-hand. (See Engines, etc.)

Pipe.—City of Panama, Fla.—Prices on carload (more or less) of double-strength V. C. P. 12 to 24-in., including inlet connections, elbows and quarter bends. Address J. N. Faile.

Piping.—Hutcheson Coca-Cola Bottling Works, Magnolia, Ark.—6-in. second-hand pipe suitable for well casing.

Pump (Oil).—National Steel Products Co., R. S. Bohannon, Mgr., 1412 Jefferson County Bank Bldg., Birmingham, Ala.—Prices on small oil pump; 200 volts, 3-phase, A. C.

Pump (Tank).—Southern Machinery Co., 407 Empire Bldg., Knoxville, Tenn.—Dealers' prices on 6-in. discharge low-service tank pump.

Pumps (Mine).—Guyan Machine Shops, Logan, W. Va.—Dealers' prices on belt, or motor-driven mine pumps.

Pumps (Turbine).—City of Wilmington, N. C., J. Newton Johnston, City Engr.—Prices on turbine pumps.

Rails.—J. W. Hoopes, Denbigh, Va.—Prices on 1000 ft. 20-lb. track, with fish plates and spikes; new or second-hand. (See Engines, etc.)

Rails.—Garland P. Feed, Treas. Claremont Marl Products Co., Box 887, Norfolk, Va., and Richard K. Meade & Co., Engrs., Law Bldg., Baltimore, Md.—Prices, stating location, inspection facilities, etc., on 1000 or less 20 to 40-lb. narrow-gauge track, with fishplates; new or second-hand.

Refrigerating Plant.—Treasury Dept., Supervising Architect's Office, Washington, D. C.—Bids until August 26 for refrigerating plant in United States Marine Hospital, Key

West, Fla.; copies of specifications obtainable from architect's office and that of custodian.

Road Construction.—Cole County Court, Jefferson City, Mo.—Bids until Sept. 5 for 26 mi. highway; State Road Project No. 1; grading, gravel surfacing, macadam, culverts, bridges, etc.; bond for \$13,000; E. F. C. Harding, State Highway Engr., Jefferson City.

Road Construction.—Charles County Road Comms. (Robt. Conlin and Harry R. Bowling), La Plata, Md.—Bids until Aug. 27 to construct road from west end of State-aid road as now constructed (from La Plata to Riverside) to Welcome, and from Ironsides toward Grayton (via Doncaster route) for 3 1/2 mi.; specifications and plans from State Roads Comn., Garrett Bldg., Baltimore.

Road Construction.—Randolph County Road Improvement Dist. No. 3, Ben A. Brown, Pres., Pocahontas, Ark.—Open bids Sept. 2 at Pocahontas State Bank to construct 10 mi. hard-surface road; \$75,000 available; Engr., Engineers Highway Dept. of Arkansas.

Road Construction.—Broward County Comms., Frank A. Bryan, Clerk, Fort Lauderdale, Fla.—Bids until Sept. 3 to build highway in Special Road and Bridge Dist. No. 2; plans and specifications on file; H. C. Davis, Engr.

Rollers (Track).—Garland P. Feed, Treas. Claremont Marl Products Co., Box 887, Norfolk, Va., and Richard K. Meade & Co., Engrs., Law Bldg., Baltimore, Md.—Prices, stating location, inspection facilities, etc., on 12 track rollers; new or second-hand.

Rope (Wire).—Garland P. Feed, Treas. Claremont Marl Products Co., Box 887, Norfolk, Va., and Richard K. Meade & Co., Engrs., Law Bldg., Baltimore, Md.—Prices, stating location, inspection facilities, etc., on 900 ft. 5/8 to 3/4-in. wire rope for hauling; new or second-hand.

Roofing.—District Comms., Washington, D. C.—Bids until August 28 to furnish roofing slate and nails.

Roofing.—R. B. Carswell, Fort Madison, Iowa.—Quotations on Taylor's IX old-style tin.

Sander.—See Scraper (Floor; Electric.)

Sawmill Equipment.—Penrod Walnut & Veneer Co., W. S. Smith, Mgr., second floor 316 S. Jefferson St., Roanoke, Va.—Prices on D. C. D. D. hoisting engine with boiler; second-hand band sawmill; six 36-in. band serrated saws; 100 H. P., two 25 H. P. and six 5 H. P. 3-phase 60-cycle A. C. motors.

Saw Rig (Electric).—Gehr Construction Co., Alexandria, La.—Prices on electric saw rig.

Scraper (Floor; Electric) and Sander.—Gehr Construction Co., Alexandria, La.—Prices on electric floor scraper and sander.

Sewing Machines.—Cheraw Underwear Co., Robt. Chapman, Mgr., Cheraw, S. C.—50 to 60 sewing machines to finish knit union suits.

Sewer Construction.—City of Durham, N. C., A. G. Elliott, Supt.—Correspondence with contractors, view to letting sewer trench work. (See Trenching Machine.)

Sewers.—City Council, R. L. Seldon, City Clerk, Daytona Beach, Fla.—Bids Sept. 3 on 2200 lin. ft. 18-in. drain pipe; 1000 lin. ft. 15-in. and 1600 lin. ft. 12-in. sewer pipe; 2000 lin. ft. 4-in. house connections, 15 manholes, 400 lin. ft. 10-in. drain pipe, 20 catch basins; in connection with paving. (See Paving, etc.)

Shovel (Traction).—Easton Machinery Co., 602 Drake Bldg., Easton, Pa.—Dealers' prices on 3/4, 1 or 1 1/2 traction shovel.

Tank and Tower.—Marboro Cotton Mills, McColl, S. C.—Prices on tank and tower; 50,000 to 100,000 gals. capacity; second-hand.

Tanks (Oil).—National Steel Products Co., R. S. Bohannon, Mgr., 1412 Jefferson County Bank Bldg., Birmingham, Ala.—Prices on two 10,000-gal. welded oil tanks; also 1000-gal. pressure oil tank.

Tannery Machinery.—J. B. Prevatt, Florahome, Fla.—Data and prices on equipment for small leather tannery.

Tenthouses.—Treasury Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C.—Bids until August 26 for tenthouse for U. S. Marine Hospital at Key West, Fla.; specifications and drawings at office Custodian of Station and office Mr. Wetmore as above.

Trenching Machine.—City of Durham, N. C., A. G. Elliott, Supt.—Correspondence relative to hiring sewer trenching machine, or will let contract for sewer work.

Trucks.—See Brick-making Machinery.

Wagons (Ice).—J. Walter Hosler, care of Suffolk Cotton Gin and Grist Mill, Suffolk, Va.—Prices on new or good second-hand ice wagons.

RAILROAD CONSTRUCTION

RAILWAYS

Ark., Mena.—H. W. Knight of Chicago and the Mena Commercial Club are working on plans for the construction of an interurban electric railway from Mena to Hot Springs, Ark., via Womble or Mount Ida, about 65 mi. Mr. Knight's address is Antlers Hotel, Mena, Ark.

Miss., Iuka.—The Iuka North & South Railroad Co., capital stock \$1,000,000, has been organized to build a line from Iuka southward toward Reform, Ala., about 100 mi., to connect with the Alabama, Tennessee & Northern Railway which runs to Mobile; survey to begin soon. Later an extension north from Iuka to some point in Tennessee is to be made. Company desires to hear from contractors, material men and equipment manufacturers. Theo. A. Smith, Pres.; F. F. Carmack, V. P.; T. M. McDonald, Secy.-Treas., and Geo. L. McMaster, Industrial Agent.

Mo., Carrollton.—Right of way is reported to have been secured for the construction of a cut-off from Carrollton to Moberly, Mo., about 60 mi., to be owned by the Santa Fe and the Burlington roads. C. F. W. Felt, Chicago, Ill., is chief engineer of the Santa Fe.

N. C., Shull's Mills.—Extension of the Linville River Railway from Shull's Mills to Boone, N. C., 8 mi., has 2 1/2 mi. of track laid and grading nearly done for all. G. W. Hardin, Johnson City, Tenn., is Supt.

STREET RAILWAYS

Tex., Waco.—Texas Electric Railway Co. is building an extension approximately 1 1/4 mi. long, from 28th and Lasker Sts. into the Army Replacement Camp. Company forces are doing the work. All material at hand. A. J. Bush, Jr., is local manager.

Va., Norfolk.—Permission has been granted by the Board of Aldermen to the Virginia Railway & Power Co. to build additional tracks on York, Granby, Newton (or Bousch) and Main Sts., besides on Holly Ave. T. N. Jones, Jr., is Asst. Gen. Mgr.

"The Liberty Book" on Food Saving

The Liberty Book of the International Harvester Co., Chicago, is described as being the result of a desire upon the part of the educational department of that company to assist in bringing about increased efficiency in those things which enter into the problem of human food, according to a letter from Dr. P. G. Holden, director of the agricultural extension department, who also writes: "It is published for the sole purpose of helping the people of America to do their share in achieving that which is nearest to every American heart—the winning of the war." The opening pages of this publication are devoted to specific warnings and advice about wastes which cost the country so much in food supplies. These are accompanied by counsel as to savings which may be accomplished by all of us. Other important matters considered are the raising and care of livestock, cultivation of grains, alfalfa, etc.; the preparation of ensilage and its preservation in silos for winter feeding, the eradication of the cattle tick, care of farm machinery, which is so often carelessly left out in the weather to rust and otherwise deteriorate. Hints concerning agricultural education in country schools are also presented. The book is well illustrated. A copy will be sent to anyone who is interested if the company is asked for it.

In writing to parties mentioned in this department, it will be of advantage, to all concerned if the Manufacturers Record is mentioned.

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\$4,000,000



Total Resources
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FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

FINANCIAL CORPORATIONS

Ark., Dardanelle.—First National Bank chartered; capital \$25,000.

Ark., Des Arc.—First National Bank chartered; capital \$25,000.

Fla., Jacksonville.—Liberty Investment Co., capital \$5000, incptd. R. E. Wheeler, Pres.; Charles Blum, V.-P.; A. R. Merrill, Secy.-Treas.

Fla., Lakeland.—Peoples' Bank is reported merged with the First National Bank.

Ga., Dublin.—Southern Exchange and the Commercial banks have consolidated under the name of the former institution; capital \$50,000. T. B. Hicks, Pres.; M. E. Burts, Cashier.

Okla., Billings.—National Bank of Billings, capital \$25,000, surplus \$5000, will begin business Sept. 1. F. R. Zacharias, Enid, Okla., Pres.; W. G. McChusky, V.-P.; Hal C. Jones, Cashier, and Dan Neil, Jr., Asst. Cashier, Billings.

S. C., Aiken.—Citizens' Bank, capital \$25,000, commissioned. Petitioners: A. M. Den

bow, Bamberg; J. M. Holly, Alben, and Joseph Norwood, Columbia.

S. C., Andrews.—Farmers & Merchants Bank, capital \$50,000, commissioned. Petitioners: D. M. Moyd, J. M. Irby and A. A. May.

S. C., Navy Yard.—Charleston Trust Co. chartered, capital \$25,000, will soon begin business. E. H. Pringle, Pres.; E. H. Pringle, Jr. and G. W. Walker, V.-Ps.; A. L. La Coste, Secy.; R. S. Small, Treas. (Lately noted under Charleston.)

Tenn., Nashville.—First Savings Bank & Trust Co. proposes establishing following branches: Broadway, Flat Rock, West Nashville, Union Stock Yards, North Nashville and Hadley's Bend.

Tex., Bonham.—Fannin National Bank, succeeding the Fannin County National Bank, applied for charter; capital \$100,000.

Tex., Eastland.—Guaranty State Bank will begin business in about 30 days with Cleaves Rhea of Whitney, Pres.; T. W. Duncan, Eastland, and A. D. Rhea, Whitney, V.-Ps.; R. R. Lovdon, Cashier.

Tex., Pampa.—Pampa National Bank applied for charter; capital \$25,000.

Tex., Stratford.—Sherman County National Bank chartered; capital \$25,000.

Va., Portsmouth.—Second National Bank, capital \$100,000, is being organized by Charles Harper, C. H. Herbert and Archibald Ogden.

W. Va., Charleston.—Equity System & Finance Co., capital \$50,000, incptd. by F. A. Holman, C. H. Peter, J. H. Hundley and others.

NEW SECURITIES

Ala., Bessemer.—(Municipal).—City has sold to Sidney Spitzer & Co., Toledo, O., \$30,000 of municipal improvement bonds.

Ark., Arkadelphia.—(Road).—Clark County has sold to Whitaker & Co., St. Louis, \$10,000 of bonds. Address County Commrs.

Ark., Walnut Ridge.—(Drainage).—Black Spine Drainage Dist., Lawrence County, asks bids until noon August 28 for \$10,000 of 6 per cent. 5-15-year or 5-20-year bonds. Chas. Jones, W. G. Moore and A. J. Corning, Commrs.

Ark., Walnut Ridge.—(Road).—Road Dist. No. 7, Lawrence County, asks bids until noon August 28 for \$28,000 of 6 per cent. 5-15-year or 5-20-year bonds. Frank Davenport, J. W. Mosley and W. G. Moore, Commrs.

Fla., Fort Myers.—(Road, Bridge).—Island Special Road and Bridge Dist., Le County, J. F. Garner, Clerk, has voted \$100,000 of 6 per cent. \$500 denomination bonds, dated July 1, 1918, and maturing 1939 to 1941, inclusive.

Fla., Kissimmee.—(Road, Bridge).—Oswald County Commrs., J. L. Overstreet, Clerk, asks bids until 10 A. M. Sept. 2 for \$46,500 of 6 per cent. bonds Special Road and Bridge Dist. No. 3.

Fla., Marianna.—(Bridge).—Jackson County sold at par, accrued interest and \$125 premium to Powell, Garard & Co., Chicago, \$1,000 of time warrants to provide county's share for constructing bridge over the Apalachicola River.

Fla., Miami.—(Park, Hospital).—City sold to Robertson-Humphrey Co., Atlanta, the following bonds: \$15,000 park at \$145, \$10,000 hospital at \$9700 and accrued interest; also \$175,000 of bonds at accrued interest and \$2650 premium, which include \$65,000 sewer, \$40,000 street, \$40,000 bridge and \$30,000 railway and dock bonds.

Fla., Monticello.—(Light).—City voted \$1,500 of 6 per cent. 5-20-year light-plant purchase bonds. Address The Mayor.

Fla., Moore Haven.—(Street).—City voted \$30,000 bonds. Address The Mayor.

Fla., Wauchula.—(Electric).—City voted \$24,000 of bonds for purchase of electric plant and for installing new machinery. Lewis Carlton, J. F. Chisholm and D. O. Ratliff, bond trustees.

Ga., Newington.—(School).—City votes Aug. 20 on \$5000 of 5 per cent. \$100 denomination bonds, maturing 1920 to 1941, inclusive. Address School Board.

Ky., Pineville.—(Courthouse).—Bell County will vote in November on \$75,000 of bonds. Address County Commrs.

La., Gueydan.—(Water, Light, Ice).—City rejected all bids received August 12 for \$4,000 of 5 per cent. serial \$100 denomination bonds offered on that date. M. L. Ramsey, Mayor.

La., Burns.—(Levee).—Burns Levee Dist. Commrs., R. S. Leovy, Pres., will offer for sale \$25,000 of 5 per cent. \$100 de-

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August 22, 1918.]

maturation bonds; dated May 1, 1918; matur-
ity May 1, 1928. (Lately noted.)

Miss. Charleston—(Road).—Tallahatchie
Road Dist. No. 3 voted \$30,000
bonds. Address County Commrs.

Miss. Cleveland—(School).—Bollivar
County Supvrs. P. B. Woollard, Clerk, ask
bids until 10 A. M. Sept. 2 for \$7000 of bonds
to consolidate School Dist., and \$10,000
of bonds to consolidate School Dist.

Miss. Corinth—(County).—Alcorn County,
W. C. Sreat, Atty., offers for sale 2 P. M.
Sept. 3 \$25,000 of 6 per cent. 15-year bonds.

Miss. Ellisville—(School).—Jones County
Supvrs. are planning to issue \$22,000 of
bonds as follows: Penderoff Separate School
Dist., \$15,000; Glade Consolidated School
Dist., \$3,000; Johnson Consolidated School
Dist., \$4,000.

Miss. Senatobia—(School).—Crockett Con-
solidated School Dist., Tate County, sold at
State Bank with 30 days with
\$1000 of 6 per cent. \$500 denomination bonds,
dated July 1, 1918, and maturing 1919 to 1938,
inclusive.

Miss. Yazoo City—(Warrants).—City will
issue \$100,000 of 6 per cent. loan warrants; S.
S. Griffin, Clerk.

Mo. Fayette—(Road).—Howard County
voted Sept. 14 on \$700,000 of bonds. Address
County Commrs.

Mo. Kansas City—(Ice Plant).—City will
vote in November on \$100,000 of bonds for
municipal ice plant. Address The Mayor.

Mo. Mexico—(Hospital).—Audrain County,
R. B. Cuthbert, Clerk County Court, opened
bids August 17 for \$75,000 of 5½ per cent.
\$1000 denomination bonds, dated May 1, 1918.
Award not stated.

N. C. Durham—(Water).—City, Geo. W.
Woodward, Clerk, has decided to postpone
sale of \$100,000 of 6 per cent. 40-year bonds.
Lately noted to receive bids August 20, de-
livery to be made August 27.

N. C. Charlotte—(Loan).—City has sold
to the Independence Trust Co. two loans,
one for \$20,000 and the other for \$50,000. F.
R. McInch is Commr. of Finance. (Lately
noted.)

N. C. Charlotte—(School).—City School
Board contemplates selling \$15,000 of bonds.

N. C. Dobson—(School).—Dobson Graded
School Dist., Surry County, sold at public
auction August 5 at \$5051 to C. H. Coffin,
Chicago, Ill., \$5000 of 6 per cent. 20-year \$500
denomination bonds.

N. C. Goldsboro—(School).—Commrs.
Wayne County are planning to issue \$25,000
of Goldsboro Township bonds, recently voted.

N. C. Tarboro—(Light).—City, J. M.
Jacobs, Town Clerk, offers for sale 8 P. M.
Aug. 30, \$50,000 of 6 per cent. bonds.

Okla. Carney—(Gas Plant).—City is re-
ported to have authorized issue of \$4500 of
6 per cent. 10-year gas-plant bonds. Address
The Mayor.

Okla. Depew—(Water).—City contemplates
issuing bonds. Address The Mayor.

Okla. Jay—(Road, Bridge).—Delaware
County on August 6 defeated \$70,000 bridge
and \$30,000 road bonds. Address Claude
Thompson, County Clerk.

Okla. Hominy—(Water-works).—City con-
templated issuing \$50,000 of bonds. L. Hall,
City Clerk.

Okla. Ponca City—(Water, Light).—City
voted \$75,000 bonds. Address The Mayor.

Okla. Tulsa—(School).—Broken Arrow In-
dependent School Dist. No. 7, Tulsa County,

W. D. Ownby, Clerk, asks bids until 8 P. M.
Sept. 9 for \$5500 of 5 per cent. \$500 denomina-
tion bonds, dated Oct. 1, 1918, and maturing
Oct. 1, 1938.

S. C., Greenville—(School).—Greenville
County Board of Education on July 25 sold
at \$4025 to the Hanchett Bond Co., Chicago,
Ill., \$4000 of 6 per cent. 20-year bonds.

Tenn., Bristol—(Street).—City plans to
issue \$47,500 of bonds. Address The Mayor.

Tenn., Harriman—(Funding, School).—City
voted August 1 to issue \$13,000 of funding
bonds; \$17,000 school bonds defeated. W. C.
Anderson, Mayor.

Tenn., Memphis—(Dock).—Memphis has
had approved by the Capital Issues Commit-
tee at Washington, \$500,000 of bonds voted by
the city. It is stated the bonds will be pur-
chased by A. B. Leach & Co., New York.

Tenn., Nashville—(Notes).—State of Ten-
nessee has sold to National City Co. and
Redmond & Co., \$1,000,000 of six months 4½
per cent. State notes, to provide funds to
meet \$1,000,000 obligation maturing August 20.

Tex., Anderson—(School).—Richards In-
dependent School Dist., Grimes County, has
had approved by Atty.-Gen. \$7000 of 5 per
cent. 10-20-year bonds. Address County
Commrs.

Tex., Baird—(School).—Callahan County
School District 32 has had approved by Atty.-
Gen. \$1500 of 5 per cent. 20-year bonds. Ad-
dress County Commrs.

Tex., Boerne—(Road).—Road District 3,
Kendall County, sold at par and accrued
interest \$80,000 of 5 per cent. 20-40-year \$1000
denomination bonds to H. M. Noel & Co.,
St. Louis.

Tex., Crockett—(Road).—Houston County
Road Dist. No. 7 has had approved by Atty.-
Gen. \$50,000 of bonds. Address County
Commrs.

Tex., Crockett—(School).—Crockett In-
dependent School Dist. has had approved by
Atty.-Gen. \$15,000 of 5 per cent. 10-40-year
bonds. Address School Board.

Tex., Electra—(Water-works).—City has
had approved by Atty.-Gen. \$25,000 of 6 per
cent. serial warrants. Address The Mayor.

Tex., Lockhart—(School).—Caldwell County
has had approved by Atty.-Gen. \$4000 of 5
per cent. 5-20-year bonds school district No.
38. Address County Commrs.

Tex., Lefors—(Road).—Gray County has
had approved by Atty.-Gen. \$75,000 of 5 per
cent. 10-30-year bonds. Address County
Commrs.

Tex., Lubbock—(School).—Lubbock County
school district bonds voted as follows: Ida-
loun, \$8000; Caldwell, \$4500; Hardy, \$1600;
Posey, \$2000; McClung, \$1500; Ropes, \$15,000.
Address County Commrs.

Tex., Lubbock—(School).—Lubbock In-
dependent School Dist., Lubbock County, has
had approved by Atty.-Gen. \$6000 of 5 per
cent. 20-40-year bonds. Address County
Commrs.

Tex., Palestine—(Road).—Anderson County
Road Dist. No. 3 has had approved by Atty.-
Gen. \$40,000 of 5½ per cent. serial bonds.
Address County Commrs.

Tex., Biogrande—(Road).—Starr County
has had approved by Atty.-Gen. \$5000 of 5
per cent. 10-40-year bonds. Address County
Commrs.

Tex., Sulphur Springs—(Road).—Hopkins
County has voted \$35,000 bonds. Address
County Commrs.

Tex., Waco—(Sewage, Sewer).—City has
had approved by Atty.-Genl. \$350,000 of 5 per

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cent. 30-year \$1000 denomination sewage-disposal plant and sanitary-sewer-repair bonds, to be sold Aug. 22; Ed McCullough, Mayor. (Lately noted.)

Va., Petersburg.—City has sold at par \$34,000 of bonds. Address The Mayor.

W. Va., Wheeling.—(School).—Triadelphia School Dist., Ohio County, at election Aug. 6, defeated \$114,000 school-furnishing and \$80,000 high-school 6 per cent. \$1000 denomination bonds, dated Nov. 15, 1913.

FINANCIAL NOTES

First National Bank, Camden, S. C., increased capital from \$50,000 to \$75,000.

Guaranty State Bank, Houston, Tex., increased capital from \$30,000 to \$50,000.

Farmers and Merchants' State Bank, Shamrock, Tex., increased capital from \$25,000 to \$50,000.

Farmers and Merchants' State Bank, Shamrock, Tex., increased capital from \$25,000 to \$50,000.

Brown Savings & Banking Co., Norfolk, Va., increased capital from \$10,000 to \$50,000.

Harry W. Neepler, formerly manager of the bond department of the Interstate Trust & Banking Co. of New Orleans, has become associated with J. S. Wilson, Jr. & Co., bankers, Baltimore, in a similar capacity.

W. P. G. Harding of Birmingham, Ala., has been appointed by President Wilson to a third successive term as governor of the Federal Reserve Board.

Aggregate resources of the State banks and trust companies of Maryland on June 29 as reported by the bank commissioner, J. Dukes Downes, were \$200,813,048.77. Loans and discounts were \$90,220,510.38. Demand deposits, \$88,910,714.59; time deposits, \$58,613,824.51, and city of Baltimore deposits, \$4,420,500. The increase in resources since June 20, 1917, was \$15,976,302.53.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Addition to Pneumatic Tool Plant.

The Chicago Pneumatic Tool Co. announces that contract has been let and work started on the erection of an up-to-date addition to its Cleveland plant, which is planned to double the present output. It is expected that work will be completed on the building itself about November 1. The necessary equipment has been ordered, and it is believed will be delivered and ready for installation by the time the structure is completed, so that the additional production contemplated will be available very soon thereafter.

Goes With Research Corporation.

E. P. Dillon, manager of the railway and power division at the New York office of the Westinghouse Electric & Manufacturing Co., has resigned to become general manager

of the Research Corporation of New York. Before entering the service of the Westinghouse organization in 1909 he was connected with mining and electric companies in Colorado. For several years he was assistant to the manager of the railway and lighting department at East Pittsburgh, and last year he was transferred to be manager at New York.

Opening of New Welding Shop.

A new welding shop has just been opened by the Imperial Brass Manufacturing Co., Chicago, which, among other work, can take care of Government contracts for tanks, cans, containers, ovens, etc., that require the joining of metal to metal. The shop is thoroughly equipped, and it has a staff of expert welders, who can assist manufacturers in making prompt deliveries, matu-

ring production and reducing manufacturing costs. The oxy-acetylene welding process is employed. Broken automobile parts and other machinery of all kinds are also repaired at this plant, which occupies a building 50x150 feet, built especially with a view to expediting Government contract work. The address of the company is 1200 W. Harrison St.

Empire Engineering Co.

At the recent annual meeting of the Empire Engineering Co., Inc., 6 Church St., New York, officers were elected as follows: President and chairman, J. H. McClement; vice-president and general manager, J. Rulon Miller, Jr.; vice-president, Beverly R. Value; secretary, treasurer and controller, C. A. Nicklas. Other members of the board of directors are Alfred Skitt and Franklin Nevius, who, with Mr. McClement, compose the executive committee. The company also has offices at 708 Morgan Bldg., Buffalo, N. Y., and 103-104 Bourse Bldg., 408 Water St., Baltimore, Md. It has lately completed about \$60,000,000 worth of contracts for several clients, including the State of New York, the Pennsylvania Railroad, City of New York, Baltimore & Ohio Railroad, United States Government, Bethlehem Steel Co. and others.

TRADE LITERATURE

About National Pavement.

"In reviewing the merits of the various types of road construction it is well to bear in mind certain fundamental requirements for the perfect wearing surface and their relation to proper foundation construction. The wearing surface of the road should be waterproof, thus protecting the foundation, and should possess a certain elastic resiliency that enables it to yield to expansion or contraction without fracture, and to cushion under the impact of the heavily loaded vehicles, thus giving endurance to the road and reducing the effect of shock upon the vehicle. It should be tenacious, so that it will not deform under the roller action of heavy traffic." This and other remarks of great value are contained in a bulletin discussing "National Pavement, the Right Road," issued by the Permanent Highways Corporation, 50 E. 42nd St., New York. The book is finely illustrated with sundry pictures, accompanied by descriptions of this pavement.

A Good Magazine.

Two copies—one for April and one for May—of "Our Social Magnet," a magazine published by the American Car & Foundry Co., Detroit, have been received. Its objects, as declared upon the cover pages, are welfare co-operation, accuracy, domesticity, thrift, education, sanitation, recreation and safety first. Perhaps the best things in it are the editorials cautioning everyone against waste and pointing out how waste occurs. For instance, office supplies and stationery are considered and it is revealed how wasteful many employees are in the use of these things for which they do not have to pay. In the same vein the use of factory supplies is discussed. Everybody can learn something from these articles for they include many suggestions applicable in various ways to other lines of work. But precepts are not the only reading matter by any means; they are only a small part of it for there are also lively contributions of general interest, many of them relating to war and personal experiences therein, bits of snappy verse, etc.

Electric Trucks and Tractors.

Pamphlets describing and illustrating electric utility trucks and also electric tractors for all industrial uses have been issued by the Baker R. & L. Co. of Cleveland, the manufacturers of these vehicles. These products are of either two or four wheel drive and four-wheel steer. Other industrial machines are also built to be employed like these for warehouse, railroad, steel mill, foundry, and manifold other work wherever such tractors and trucks would be of value. Their short turning radius is a very important feature, and they revolutionize working conditions without disturbing the layout or

system of a plant. A passageway only a few inches wider than the machine is all that is required for operation, and the wheel steering makes turning easy in the narrowest aisles. This reading matter is attractively prepared with pictures and complete descriptions.

Ice and Refrigerating Machines.

In Bulletin R-4 of the Henry Vogt Machine Co., Inc., Louisville, Ky., the ice-making and refrigerating machinery manufactured by this corporation is fully described and illustrated, and there are also pictures of a number of buildings where these products have been installed. The foreword says: "Thirty-six years of effort in the design and construction of the Vogt absorption machine has brought forth the present economical and efficient exhaust steam unit. By the mere statement of this fact it is not to be inferred that perfection has been reached; if it had there would be no further incentive to improvement. By an exhaust steam unit is meant a refrigerating machine capable of developing its rated capacity through the use of steam that has already performed useful work. The saving of fuel is immediately apparent. A further economy is effected by combining the exhaust steam refrigerating machine with any mill, light or power plant, as the ice or refrigeration so produced becomes virtually a by-product." This is possible without employing any complicated parts.

"Buffalo" Buckets, Hoists, Cranes, Etc.

"Buffalo" buckets, hoists, derricks and tractocranes are the subjects of a new catalog of the Buffalo Hoist & Derrick Co., Buffalo, N. Y. The clamshell bucket made by this company is described as the result of thorough scientific study by a corps of engineers who have been building buckets for the past 20 years, combined with this knowledge being ideas suggested by practical contractors. There are pictures and descriptions relating to every type of bucket made at this plant, and their use in connection with coal bridges, for instance, is also shown. The descriptive details make plain the excellence of the materials used in these products. The manufacturers say concerning their other goods: "From our long experience in the manufacture of hoists and derricks and special types of cranes we have found that the trend of users has been leaning gradually in the direction of a locomotive crane which in reality combines the features of a hoisting engine and derrick, and, being more portable and far more flexible, performs the functions of such equipment in a more practical, efficient and economical manner. * * * We believe we have perfected a locomotive crane technically and practically correct."

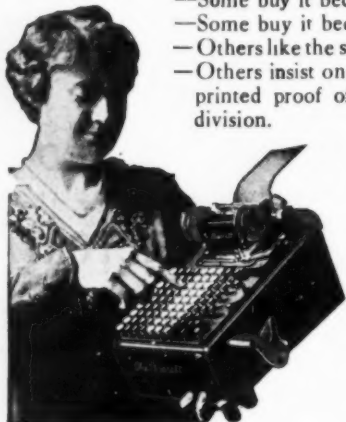
New Instrument and Relay Catalog.

Among the new types of apparatus listed for the first time in the revised edition of Westinghouse Catalog 3-B are the type AW and FW duplex instruments, which consist of any two of the standard types AW or FW instruments, respectively, contained in attractive dull-black metal cases; the types EH and PH ammeters, which are heliwire instruments, suitable for operation on either direct-current or alternating-current circuits of any frequency; the type OA watt-hour meters, for switchboard service, which are similar to the well-known standard house-service type OA watt-hour meters, except that they are designed for switchboard service; the motor-operated type M graphic instruments; type CV voltage relays, which can be furnished to operate either on under-voltage or over-voltage, as ordered; the type CP reverse-phase relays, to provide against phase reversals; type RT transfer relays, which operate with the excess current relays, such as the Westinghouse type CO and type CR, to directly energize the operating coil of the circuit-breaker from the current transformer, so separate operating circuit being required; and type CT temperature relays, which depend for their operation upon the temperature of the apparatus on the circuit as well as the amount of the overload. This catalog is issued by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

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FOR SALE—About 5000 acres of fine coal lands in the heart of the Western Kentucky field. Nos. 12, 11 and 9 seams aggregating 20 feet clear coal. On railroad. Price \$30. H. J. Graham, Lou. Trust Building, Louisville, Ky.

RATES AND CONDITIONS

Rate 25 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 23c. per line; 300 lines, 21c. per line; 500 lines or more, 20c. per line.

COAL AND TIMBER LAND

BITUMINOUS COAL.

Single tract of 5000 acres of virgin coal, carrying five workable seams. Trunk-line railroad on the tract. No uncertainty, because coal seams are exposed, and the quality and marketability of the coals are established by large mining operations now and for 20 years in progress along three sides of this 5000-acre tract. Address Senojex, Glen Summit Springs, Luzerne County, Pa.

FOR SALE—W. Va. mine, operating two seams; 400 acres; 125 tons daily; permanent disability managing owner reason for sale. National Realty Sales Co., Charleston, W. Va.

FOR SALE—2500 acres cheap mined coal land; adjacent railroad; oil tests; gassers top drift seam; down to railroad. Cavanagh, McAlester, Okla.

COAL AND TIMBER LAND

FOR SALE—Bargain: 90,000 acres Tennessee coal and timber land in parcels of 5000 to 10,000 acres, or together, \$3.00 to \$10.00 per acre; part on railroad, part fine virgin timber; good titles; exposures of highest grade coking coal. Owned by estates. E. H. Benoit, 1921 Boatmen's Bank, St. Louis, Mo.

50,000 ACRES Tennessee coal and timber lands, located in Lincoln, Franklin and Coffee counties; must sell to settle partnership. Price \$2.50 per acre; \$15,000 cash, balance on ten equal annual payments. Would accept exchange property to the amount of one-half. T. N. Figuers, Jr., Columbia, Tenn.

COAL AND TIMBER—2100 acres. All underlain New River coal. Will cut 20,000,000 or more feet spruce, hemlock, beech, birch, cherry, poplar and red oak. An "A1" proposition for investment or immediate operation. Five miles from railroad. Not in hands of real estate man. Sold only by owner, A. E. Huddleston, White Sulphur Springs, W. Va.

LOANS ON TIMBER LANDS

SALES NEGOTIATED Check Estimates for Loans on Timber Lands. Consulting Forester and Timber Land Factor. 25 Years' Experience All Parts of Country. F. R. MEIER, 165 Broadway, New York, N. Y.

TIMBER OPERATION

ABOUT one hundred million feet standing timber, short-leaf pine, in North Carolina; well located. Can also furnish equipment, including rail, locomotives, skidders, team, sawmill, planing mill and drykiln equipment, in splendid condition. William P. Redd, 30 North Ninth St., Richmond, Va.

DOGWOOD WANTED

IN LARGE QUANTITIES. We buy in logs and also ready-sawed blocks. For information write to Brevard Manufacturing Co., Brevard, N. C.

TIMBER WANTED

WANTED—WALNUT TIMBER—The Government needs it to help win the war. If you have any of this timber, it is your patriotic duty to sell it now. We are paying the highest market prices. Bristol Door & Lumber Co., Bristol, Tenn.

TIMBER

FOR SALE—Fifty million feet of fine South Carolina timber, consisting of thirty-nine million feet red gum, five million oak, three million cypress, three million short-leaf pine. This timber is very large and of fine quality; easily logged at any time of the year. Price reasonable. Accessible to railroads. Will bear closest investigation. Address No. 5033, care Manufacturers Record.

FORTY MILLION FEET of pine, principally long leaf, on navigable water in Georgia, with hand mill ready to operate. Much of it fine piling. R. B. Chaffin & Co., Inc., Richmond, Va.

TIMBER RIGHTS FOR SALE—23,040 acres virgin pine, Osceola County, Fla. Will cut 2500 feet acre. Railroad through property. A. W. Fogle & Co., Columbia, S. C.

CYPRESS TIMBER FOR SALE—About 3,000,000 feet of cypress, same being located in West Tennessee, and in the Hatchie River bottom and within four miles from the railroad. This cypress is of good grade, and the trees are of medium size. F. H. Voltermann, Brownsville, Tenn.

TIMBER LAND

SPRUCE TIMBER FOR SALE—Small acreage in Western North Carolina, estimated 15,000,000 feet spruce, 7,000,000 feet hardwoods. Eight miles from railroad, but good road from railroad to property. A fine operating proposition. Oscar L. McLurd, Asheville, N. C.

19,000 ACRES virgin timber, Lee County, Florida. Rail and water transportation. Title perfect. Land and timber \$6 acre, 1/2 cash. The timber alone will pay all. After timber is off could be sold \$25 per acre for orange grove land. Sadler, Fort Myers, Fla.

FARM AND TIMBER LANDS

20,000 acres long-leaf pine, cruised to better than 50,000,000; part finest citrus and truck land; will retail for from \$50 to \$100 per acre; 1/4 mile from railroad. Price, \$9 per acre. Lake Region Land Co., Lakeland, Fla.

WE OWN LARGE TRACTS OF TIMBER LANDS, cut-over lands and colonizing lands. If interested, address H. H. Wefel, Jr., & Co., Mobile, Alabama.

50,000 ACRES of farm and timber land for sale on the fertile west coast of Florida below the frost line in lots of 5000 acres, located on the East & West Coast Railway. The finest colonization opportunity on the market. Prices reasonable; terms easy, or will exchange for unincumbered city property. We also sell sawmill machinery. Write Thomas Camp, 37 Norcross Street, Atlanta, Ga.

FRUIT, FARM AND TRUCK LANDS

THESE COLUMNS ARE CLOSELY READ BY PEOPLE for information of all kinds about Southern properties of every description. If you have a property of any kind that you want to dispose of, try an advertisement in these columns. Others have to their advantage. For rates see head of department.

ALABAMA

TEN MILES from Montgomery, Ala., on gravel road, we have a beautiful farm, consisting of 974 acres. Part of this is black prairie land, suitable for alfalfa and grain, and other land suited for cotton and other crops. Nice dwelling and tenant-houses. Price only \$40 per acre. Duskin & Stewart Realty Co., Montgomery, Ala.

ARKANSAS

I OWN and have for sale 10,000 acres of fine agricultural cut-over land. Practically level; no swamps or overflow. Good macadam roads. Railroad stations on land. This land is in from four to ten miles of a good town of 25,000 population. Best colonization proposition in Arkansas. Price \$12.50 per acre. Just half what other land like it is selling for. Will give good terms or will take U. S. Liberty Bonds as payment. O. E. McKenzie, Box 287, Pine Bluff, Ark.

FOR SALE—Small farm, near Gulfport, Miss.; house and well; walking distance of beach; good abstract; bargain for cash. Harry B. Shibley, Van Buren, Ark.

FLORIDA

A BEAUTIFUL WINTER HOME, a profitable orange and grapefruit grove, a general farm, cattle, hog or poultry ranch in the famous Indian River section, Vero, Florida. The wonderful climate permits not only agricultural operations all the year, but all enjoyable, life-prolonging outdoor sports. Investigate now this wonderfully charming section. Indian River Farms Company, First National Bank Building, Vero, Florida.

CATTLE LANDS.

200,000 acres of land along the Miami Canal in that vast, rich empire, The Everglades of Florida, on which the State is now spending millions, deepening and widening the Miami Canal to 90 feet wide and 13 feet deep, thereby furnishing drainage and irrigation; also inland water transportation connecting with deep water at Miami. No clearing to be done. Free from cattle tick. Acre for acre, the Everglades will produce more cattle and hog feed than elsewhere in America. Our largest sales have been to actual developers. This is the cream of the 'Glades. Buy from owners. Tatum Land Company, Miami, Fla.

FLORIDA

FOR SALE AT HALF VALUE—One of the largest and best equipped irrigated farms in the State, valued at \$175,000. Has proved a steady dividend-payer for years. Easy terms. Address the owner, P. O. Box 32, Fort Myers, Florida.

GEORGIA

330 ACRES, 8 1/2 miles from center Atlanta, 125 acres fine timber. 70 acres creek bottom. On cherted road, near good schools. C. L. DeFoor, 212 Empire Bldg., Atlanta, Ga.

BARGAINS IN FARM LANDS—For bargains in Middle Georgia farm lands get in touch at once with Stubbs & East, Real Estate Brokers, Eatonton, Ga.

SOUTH CAROLINA

FOR SALE—About 7500 acres of land on the coast of South Carolina in a long-leaf rice and truck section; Seaboard Air Line Railroad passing through it. Fine productive land, with good drainage and plenty of duck and game preserve. Address for particulars Box 865, Charleston, S. C.

TENNESSEE

I OFFER 5200 ACRES of splendid land in Southern part of Middle Tennessee. Well located. No one could ask for a better investment. J. W. McClung, Charlotte, N. C.

VIRGINIA

FOR SALE—100 acres fine orchard land with 700 bearing trees. LIBERTY REALTY CO., ROANOKE, VA.

BUSINESS OPPORTUNITIES

FARMING OPPORTUNITIES AND INDUSTRIAL SITES along the Winston-Salem and Southbound Rwy. Co. Here climate, transportation, good roads, fine schools and excellent markets contribute to the success of farming, and the large and prosperous industrial centers along our lines offer splendid locations for industries of various kinds. Address S. P. Collier, Jr., Winston-Salem, N. C.

BACK-FILLING MACHINE, covered by patents in five countries. Will back-fill levees and water trench for one-half the expense of any other machine. Will fill in fourteen-foot alley. Wish to correspond with manufacturers either for sale of patents or rights basis. Have patterns and blueprints. Machines in operation five years. H. W. Cawell, Port Arthur, Tex.

WANTED—Responsible party to log and saw million feet of lumber; will pay 1 cent price. Liberty Lumber Yard, Roanoke, Va.

WANTED—Man with capital enough to construct sawmill with 30,000 ft. capacity. To cut 30,000,000 ft. of timber in Florida. Address 705 Union Trust Bldg., Washington, D. C.

FOR SALE—Plant having daily capacity one and one-half tons sodium sulfide and three tons barium salts, located Curtis Bay chemical district, Baltimore, on railroad. Address No. 5158, care Manufacturers Record.

IF YOU cannot secure elsewhere a purchase or a sale, try Dennis Thibault, broker and commission merchant, 15 Whitehall Street, New York, N. Y.

NEW GARAGE in Fayette, Mo., 280 county-seat, 3 schools, well located; 1000 sq. ft. 3 miles west of Armstrong; front house, with light and water. All in cultivation. Come and investigate, and we show you. Address Alex. Denny, 310 Denny St., Fayette, Mo.

FOR SALE—A valuable patent by owner and inventor. About 260 acres of fine timber land and good income property. J. Kilmer, 310 N. 3d Ave., Durant, Okla.

WE CAN SELL YOUR BUSINESS for cash, no matter where located; no publicity. Describe fully in first letter. All correspondence confidential. Herbert, Webster Bldg., Chicago.

WANTED—To sublet 150,000 cu. yds. dry land dredge work. Also sell one 3/4-hp. land dredge, full circle machine, four-cylinder, kerosene engine. Reason for selling, have to go to war. Address A. J. Hansen, Livia, Ky. Railroad, Buel, Ky.

WANTED—Active or silent partner to develop mining proposition in Southeastern Kentucky. We own land in fee and some leased. Two seams of good coal in heart of proven district. Switches allowed; grading done; steel bought and on the ground. Small amount needed to develop, or will sell. Branch Coal Co., Box 3, Gray, Ky.

FOR SALE—Good light plant, main plant in town 2000, and transmission line connects with another town of 1500. Growing trees and growing revenue. Practical light plant with some means can handle on reasonable payment. Would take some land at value. Plant up to date so far as machinery is concerned. W. E. Lowe, DeLeon, Texas.

BUSINESS

We have an excellent opportunity for packing and shipping. Address: 1000 N. 1st St., New York, N. Y.

IF YOU

can't find a job, we can help you. Address: 1000 N. 1st St., New York, N. Y.

FOR SALE

—A small business opportunity. Address: 1000 N. 1st St., New York, N. Y.

THE

best of all. Address: 1000 N. 1st St., New York, N. Y.

GOVERN

ment. Address: 1000 N. 1st St., New York, N. Y.

INCORPOR

ated. Address: 1000 N. 1st St., New York, N. Y.

DELA

ware. Address: 1000 N. 1st St., New York, N. Y.

TRADE

Accompany. Address: 1000 N. 1st St., New York, N. Y.

PAT

ent. Address: 1000 N. 1st St., New York, N. Y.

PATENT

Yours. Address: 1000 N. 1st St., New York, N. Y.

PATENTS

and inventions. Address: 1000 N. 1st St., New York, N. Y.

PATENT

secured by. Address: 1000 N. 1st St., New York, N. Y.

THAT

Adrian and. Address: 1000 N. 1st St., New York, N. Y.

FACTORY

W. Address: 1000 N. 1st St., New York, N. Y.

FREE

PAID. Address: 1000 N. 1st St., New York, N. Y.

FOR SALE

—A small business opportunity. Address: 1000 N. 1st St., New York, N. Y.

FOR SALE

—A small business opportunity. Address: 1000 N. 1st St., New York, N. Y.

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FOR SALE

—A small business opportunity. Address: 1000 N. 1st St., New York, N. Y.

MACHINERY AND SUPPLIES

FOR SALE
75-HORSE-POWER BOILER.
F. M. HUGHSON,
ROANOKE, VA.

Published Every Thursday

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

More Southern Proposal Advertising is Printed In The Manufacturers Record Than In Any Other Paper

Bids close September 10, 1918.

PROPOSALS FOR IRON OR STEEL Cable, Cast-Iron Water Pipe, Bolts, Wire Nails, Screws, Copper Tacks, Brass, Bronze, Copper, Terneplate, Solder, Fire Extinguishers, Platform Scales, Window Glass, Vitrified Sewer Pipe, Harness and Sole Leather, Brooms, Oakum, Rubber Gaskets, Flags, Saddle Pads, Hammer Handles, Spar Buys, Floor Wax, Borax, Bicarbonate of Soda, Sal Soda, Graphite, Red Oxide of Mercury, Calcium Chloride, Barium Sulphate, Lampblack, Ethyl Alcohol, Spermin Oil, Asphaltum, Tar, Pitch, Asphalt, Carbon Bisulphide, Ammonia, Oxalic Acid, White Lead, White Zinc, Enamel, Drier, Copper Paint, Locomotive Black, Memorandum Books and Paper. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock A. M. September 10, 1918, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this circular (1229) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La.; and Fort Mason, San Francisco, Cal.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close August 24, 1918.

PROPOSALS FOR DYNAMITE AND DETONATORS. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock A. M. August 24, 1918, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this circular (1228) may be obtained from this office or the offices of the Assistant Purchasing Agent, 24 State Street, New York City; 606 Common Street, New Orleans, La.; also from the United States Engineer Offices in the principal cities throughout the United States. A. L. FLINT, General Purchasing Officer.

Bids close September 5, 1918.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., August 5, 1918. Sealed proposals will be opened in this office at 3 P. M. September 5, 1918, for the completion of the mechanical equipment (except elevator and lighting fixtures) of the United States custom-house, appraisers' stores and courthouse at Wilmington, N. C. Drawings and specification may be obtained from the Superintendent of Construction at the building or at this office in the discretion of the Supervising Architect, JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 30, 1918.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., August 9, 1918. Sealed proposals will be opened in this office at 3 P. M. August 30, 1918, for repairs to mechanical equipment in the U. S. Marine Hospital, St. Louis, Mo., in accordance with the specification, copies of which may be had at this office in the discretion of the Supervising Architect, JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 30, 1918.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., August 9, 1918. Sealed proposals will be opened in this office at 3 P. M. August 30, 1918, for roofed porches on surgeon's house and executive building and changes in heating at this station. Drawings and specifications may be obtained from the custodian of the station at Baltimore, Maryland, or at this office in the discretion of the Supervising Architect, JAS. A. WETMORE, Acting Supervising Architect.

Bids close September 5, 1918.

Road Improvement

Jefferson City, Mo.
Sealed proposals, addressed to the County Court of Cole County, Missouri, and endorsed "Proposal for Construction (or Improving) State Road, Project No. 1," will be received by the Court until 10 o'clock A. M. on Thursday, September 5, 1918, and at that time will be publicly opened and read, at the office of the County Clerk in the Central Trust Building. The proposed work includes grading, surfacing with gravel and macadam, and constructing culverts and bridges, together with other incidental work on the State Road from Huber's Ferry, on the Osage River, to the county line west of Centertown, a distance of 26.4 miles. The surfacing is to be 9 feet in width, except for 3.3 miles, which is to be 16 feet wide. Plans and specifications are on file and may be inspected in the office of the undersigned, or at the office of the State Highway Department, Jefferson City, Mo. Proposals shall be submitted upon blank forms provided for the purpose by the undersigned, and shall be accompanied by a certified check, cash deposit, or proposal bond for thirteen thousand dollars (\$13,000). The right is reserved by the Court to reject any or all bids.

COUNTY COURT OF COLE COUNTY,
MISSOURI.
By E. F. C. HARDING,
County Highway Engineer,
Jefferson City, Missouri.

PROPOSAL ADVERTISING INFORMATION

RATE: 25 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE 5 P. M. Tuesday. Copy received later cannot be published until issue of following week.

DAY LETTER: When too late to send copy by mail to reach us by 5 P. M. Tuesday, forward by day letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—25 cents per line per insertion.

Bids close September 6, 1918.

Road Improvement

Sealed bids for improvement of about 21 miles of roads in District 5 and about 14 miles in District 4, Lincoln County, Miss., will be received at the office of the Chancery Clerk, Brookhaven, Miss., until 2 P. M. Friday, September 6, 1918.

Separate proposals are required for each District. They are to be accompanied by a certified check for \$2500.

For information address
C. F. SHERMAN, Engineer,
McComb, Miss.

Bids close September 3, 1918.

Street Improvement

Sealed bids will be received by the Town Council of the Town of Daytona Beach, Florida, at the Town Hall at 7:30 P. M. on September 3, 1918, for the purpose of grading and paving Seabreeze Ave. from the Halifax River to the ocean; also First Ave. from the river to Peninsula Drive, and Silver Beach Ave. from the Halifax River to Peninsula Drive; also North Atlantic Ave. from Seabreeze Ave. to Duke St. The work will comprise also installing and furnishing drainage system and required sewer pipe.

The approximate quantities are as follows:

- 14,000 square yards of pavement.
- 2,000 cubic yards of excavation.
- 8,000 lineal feet of concrete curbing.
- 2,200 lineal feet of 18-inch drain pipe.
- 1,000 lineal feet of 15-inch sewer pipe.
- 1,600 lineal feet of 12-inch sewer pipe.
- 2,000 lineal feet of 4-inch house connections.
- 15 manholes.
- 400 lineal feet of 10-inch drain pipe.
- 20 catch-basins.

Bids will be received for Brick, Asphaltic Concrete and Concrete surface construction. Any and all bids are subject to rejection. Plans and specifications are on file with the Town Clerk, R. L. Selden.

R. L. SELDEN,
City Clerk of Daytona Beach, Florida.

Bids close September 9, 1918.

Addition to School Building

Bids will be received by the Board of Education of Tuscaloosa, Alabama, for the erection of a 48'x131' brick wall, two-story and basement addition to present High School building. Sanitary plumbing and low-pressure steam heating system to be installed by owners.

Certified check for three hundred dollars (\$300), payable to said Board of Education, to accompany bid. Bids to be addressed to and received by Jas. H. Foster, Secretary to Board of Education, until 4 o'clock on Monday, the ninth day of September, 1918, and then opened. The board reserves the right to reject any and all bids.

Bids close September 4, 1918.

Y. W. C. A. Building

Sealed proposals are requested by the Building Committee of the Young Women's Christian Association for a building to be erected at Charleston, S. C. Bids to be opened September 4 at noon at the office of D. B. Hyer, Architect, Peoples Building, Charleston, S. C. Certified check for \$250 to accompany each bid.

Deposit of \$10 per set for plans will be refunded when plans are returned. Successful bidder will be expected to enter into bond for 20 per cent. contract price.

LELAND MOORE,
Chairman Building Committee.

Bids close August 27, 1918.

Lock Gates

BOARD OF COMMISSIONERS OF THE PORT OF NEW ORLEANS,
NEW ORLEANS, LA.

SEALED PROPOSALS IN DUPLICATE WILL BE RECEIVED AT THE OFFICE OF THE PURCHASING OFFICER, BOARD OF COMMISSIONERS OF THE PORT OF NEW ORLEANS AT 833 CANAL STREET, NEW ORLEANS, LA., NOT LATER THAN 10:30 A. M. ON THE 27TH DAY OF AUGUST, 1918, AT WHICH TIME THEY WILL BE OPENED IN PUBLIC, FOR FURNISHING AND ERECTING ON FOUNDATIONS FURNISHED BY THE BOARD, OF GUANTANAMOCK LOCK, GATES AND FIXED PAGES WHICH ARE REQUIRED FOR THE LOCK BEING CONSTRUCTED AT THE ENTRANCE TO THE INNER HARBOR OF THE GREATER PORT OF NEW ORLEANS.

FORM OF PROPOSALS, SPECIFICATIONS AND DRAWINGS AND ALL NECESSARY DETAILED INFORMATION CAN BE OBTAINED AT THE OFFICE OF GEORGE W. GOETHALS & COMPANY, INC., 40 WALL STREET, NEW YORK CITY, AND AT THE OFFICES OF THE BOARD OF COMMISSIONERS OF THE PORT OF NEW ORLEANS, NEW ORLEANS, LA.

A DEPOSIT OF TWENTY DOLLARS WILL BE REQUIRED UPON ISSUANCE OF PLANS AND SPECIFICATIONS WHICH SUM WILL BE REFUNDED ON THEIR RETURN IN GOOD CONDITION WITHIN TEN DAYS AFTER THE AWARD OF THE CONTRACT.

THE BOARD RESERVES THE RIGHT TO ACCEPT OR REJECT ANY OR ALL BIDS.

JOHN R. LOOMIS,
PURCHASING OFFICER,
833 CANAL STREET,
NEW ORLEANS, LA.

Bids close September 2, 1918.

Water-Works System

Sealed proposals will be received by the Board of Public Works of Liberty, N. C., until noon September 2, 1918, for furnishing all material and machinery and the construction of a water-works system in and for the town of Liberty, S. C.

Plans and specifications may be seen at the office of the Chairman of the Board. Certified check for 5 per cent. of amount bid will be required with each bid. The right is reserved to reject any or all bids.

BOARD OF PUBLIC WORKS,
By J. F. BANISTER,
Chairman.

Bids close September 5, 1918.

Meat Packing Plant

The State Packing Co., Raleigh, N. C., let contract for meat-packing plant construction September 5. Those wishing plans will get in touch with
C. L. BROOKS ENGINEERING CO.,
Moultrie, Ga.

"ADVERTISING values should not be measured simply from the standpoint of getting immediate orders, but in a bigger and broader sense from the standpoint of business building for the future.

"Now is the time for creative advertising—advertising of a creative, educational nature will prove a measure of sound insurance and preparedness for bigger and better future markets. Moreover, this is the time to plan and look forward to organizing and building up defenses against the severe competition which is bound to come, and impressive, educational advertising will prove a powerful factor to this end."

Special Advertisements of General Interest.

The Clinton Construction Co.

309 Massachusetts Bldg.
Kansas City, Mo.

Is in the field to buy, reorganize or finance the building of Small Electric Railways, especially short steam lines, and paying, that can be changed to paying electric lines. The company is now building two electric lines, and desires to purchase rails and such other supplies as can be used in such construction. Those having anything to sell will please offer to the company.

WILLARD E. WINNER
PRESIDENT

FOR SALE AT GREAT SACRIFICE

Two manufacturing plants—one at Buffalo, New York, and one at Racine, Wisconsin, each containing about 150,000 sq. ft. of floor space. Adaptable for wood or iron work. Fully equipped with sprinklers, steam power, wood and iron-working machines. Lumber plant has large foundry fully equipped. Can give immediate possession. If interested, communicate with

M. H. MURPHY

Madison, Wis.

GOOD FACTORY SITE FOR SALE

Good site for Factory, Knitting or Woolen Mills, in city of 3000. New two-story brick, 20 by 75; on tracks of L. & N. R. R. Co. Center of coal-mining section. Water and Natural Gas in abundance. Will sell at attractive figure. Write

J. B. SNYDER

WILLIAMSBURG, KENTUCKY

PROVEN Sulphur Land

For Sale—1000 acres proven sulphur land, on railroad and in oil belt, adjoining Standard Sulphur holdings. \$250 per acre. Will sell all or part. Terms.

B. T. Biggs, Pecos, Tex

Stainless Steel

A steel which will not corrode or rust, covered by patents owned by the

AMERICAN STAINLESS STEEL CO.
1541 Oliver Bldg., Pittsburgh, Pa.

Original Licensees:

Firth-Sterling Steel Co.
Crucible Steel Co. of America.
Carpenter Steel Co.
Bethlehem Steel Co.
Washington Steel & Ordnance Co.
Haynes & Son.

FOR SALE

Centrally Located Property in the City of New Orleans

Near docks, on switch tracks. Splendid solid brick building. Easily adaptable for lofts, warehouse, manufacturing, wholesale or cold-storage purposes. Ground floor area about 15,000 square feet—total area about 90,000 square feet, or 1,000,000 cubic feet.

Price, \$150,000. Terms, one-fourth cash; balance 1-10 years at 5-1/2 per cent., interest payable semi-annually.

Further details on application to

J. L. ONORATO

Real Estate

820 Common St.

New Orleans

BUSINESS Opportunities

The Manufacturers Record will place before you each week opportunities for developing your business that will be worth many times the subscription price.

MANUFACTURERS RECORD. Baltimore, Md.
\$6.50 per year 6 months, \$3.50

FOR SALE—Steel Fire Proof Mill

Sawmill building and the 9 ft. Clark Bros. band mill complete, contained therein.

This is the plant of the AVOYELLES CYP. CO., LTD., which is practically as good as new; that is to say, band mill Corliss engine, return tubular Dutch oven boilers are estimated at 90% as good as new, balance of outfit from 75% to 90%. This was the most efficient single band mill that was ever operated, in mixed cypress and hardwood, in this State, having cut as much as 65 M ft. of boards on 11-hour run.

The steel mill frame is of bolted construction and can be easily disconnected, loaded on cars and subsequently re-erected by contractors of the American Bridge Co. who furnished us same, at a cost of about \$4,000.00.

We have one set of complete detailed specifications covering the entire plant, which consists in general of about the following:

Fireproof steel mill building, extra heavy Pacific Coast type; 9 ft. Clark Bros. band mill, weight 35,000 lbs. (will split a log 66" in diameter through the center).

Three block 58" wrought steel log carriage, extra heavy Pacific Coast type with 12"x39" direct steam feed. Prescott Steam Set Works.

Six saw, 51" edger.

One—eight saw under cut trimmer.

Four saw slasher.

Complete shingle and lath mill.

10"x12"x72" steam nigger.

One No. 1 1/2 Diamond hog.

New Allis-Chalmers log haul up rig.

One Clark automatic Corliss engine 22x24, heavy duty type, developing 530 horsepower.

Three steel case Dutch oven, return tubular boilers, 150 horsepower each, Houston, Stanwood & Gamble makes.

Extra heavy shafting, live rolls, chains, belt, etc.

The mill is belted up complete ready to run.

Here is an extra fine plant that can be moved from its present location in Winn Parish, Louisiana, re-erected and started to running within thirty days.

The mill frame itself will practically never wear out.

We are asking approximately \$50,000.00 for the entire outfit.

The mill building alone cost us over \$15,000.00 when iron was cheap.

We will have for sale and delivery in the early Fall about 19,000 lin. ft. of 35-lb. rail, and about 39,000 lin. ft. 45-lb. rail, along with two 18-ton and one 28-ton Forney Type Davenport Rod Locomotives. Four Ldger-wood Skidders. Large number of log and sawdust cars. A complete double-band sawmill at present in operation.

If interested, address

Ascension Red Cypress Co., Ltd.,

Whitney-Central Building

New Orleans, La.

French Business

To the Iron and Steel Trades—

Do you want to collaborate with French Industries?
Do you want to increase your export business?
Do you want a representative in France?
Do you want representation at the next Lyon's Fair?

If so, address

Monsieur Marius Merkin

49 Rue de la Republique - - - Lyon, France
Commission Agency—Technical and Commercial Services.

FOUNDRY and MACHINE SHOP FOR SALE

With old-established trade covering several States and manufacturing machinery and castings classed as "Governmental Purposes". Plenty of orders on hand and prepared for doing Government work. In one of the best cities in the South. Address

Box A 3, care Manufacturers Record, Baltimore, Md.

COMPLETE ICE PLANT FOR SALE

Ten-ton, steam-driven Distilled Water Ice Plant; complete. Right price to right party. Location, Southern Texas. Good railroad facilities. City now planning electric-light and water systems. Would make fine combination. Address

F. C. care Manufacturers Record, Baltimore, Md.

FIRE BRICK FOR SALE

75,000 Mexico fire brick from dismantled brick plant, also 4000 fire-kiln floor blocks. Good as new. Can name attractive prices on carload lots. Prompt shipment.

S. GOLDBERG & CO.
CEDAR RAPIDS, IOWA

SECOND-HAND BAGS FOR SALE

75,000 first-class second-hand bags. Offer same for 15c apiece f. o. b. Roanoke, Va. Write or wire. Will be sold immediately.

Roanoke Scrap Iron & Metal Co.
Box 611 Roanoke, Va

Going Saw Mill Concern For Sale

Located in the yellow pine belt of Florida. On account of failing health and the fact that his son is joining the colors, the owner of a first-class saw and planing mill, with dry kilns, standard-gauge railroad and equipment, together with ample stumpage, offers the entire proposition, subject to prior sale, at an attractive price and on favorable terms. Address

J. W. PORTER

Box 906 Birmingham, Alabama

We Make a Specialty of Dismantling

Old plants of every description, such as saw-mills, electric-light plants, etc. Our terms are spot cash. Advise us what you have to offer.

THE PIEDMONT IRON & METAL CO.
BALTIMORE, MD.

Machinery, Equipment and Supplies WANTED

WANTED ELECTRIC MOTORS

SECOND HAND WILL PAY BIG PRICES

ALTERNATING and DIRECT CURRENT from ¼ to 500 Horse Power.

1-2-3 phase ALTERNATING and 220 Volt DIRECT CURRENT

What Have You To Offer?

Send list with prices. Quick Action. If interested will mail check.

MONARCH ELEC. MOTOR CO.

Morris Benjamin, Prop.

212 Centre St.

NEW YORK CITY

WANTED

PIPE - - - 3" to 10"
RAILS - - - 12 lbs. to 35 lbs.
FLUES - - - 3" to 4"
TANKS - - - any size

If you wish to buy or sell, communicate with us.

Keystone Pipe & Supply Co.

BUTLER, PA.

WANTED

Second-hand Compressors

Air Compressors, motor driven or belted; air pressure 100 to 150 lbs.; capacity anywhere from 500 to 1000 cubic feet per minute. Send complete specification and place where inspection can be made.

HOLSOM COMPANY

18 Broadway NEW YORK

Tampa Machinery Exchange

TAMPA, FLA.

Buy, Sell and Exchange Machinery of All Kinds

WRITE US YOUR WANTS

STEAM SHOVEL

Wanted

One second-hand steam shovel, either one-half or five-eighths-yard dipper. Give detailed description, location for personal inspection and lowest cash price. Columbia Clay Co., Uhrichsville, Ohio.

COLUMBIA CLAY COMPANY
Uhrichsville, Ohio

WANTED

Hoisting Engine and Pumping Outfit

To buy a Hoisting Engine and Pumping Outfit with kerosene engine attachment, also same with steam engine attached, H. P. of each to be 10 to 15.

GEORGIA TALC CO.
ASHEVILLE, N. C.

WANTED

1000 tons of 60-lb. Relaying Rails, for Southern delivery. Prompt shipment essential.

The Isaac Joseph Iron Co.

525 Reading Road Cincinnati, O

WANTED

MACADAM ROLLER
for immediate shipment.

Address **BOX 785**

Care of Manufacturers Record

Boston Iron and Metal Co.

Buyers of Scrap Iron and Metals

Complete Plants Purchased

BALTIMORE

MARYLAND

WANTED

3000 H. P. Water Tube and Horizontal Return Tubular Boilers, high pressure; two 24 gauge Saddle-Tank Locomotives; two Traction Shovels; lot ½ and ¾ Steel Wire Ropes, long lengths. Will buy plants of any description.

E. M. CO.

602 Drake Bldg. EASTON, PENNA.

WANTED

We are in the market for a small second-hand Ice Plant, in good condition, ten to twenty-five tons capacity, to operate in connection with our sawmill plant here.

D. W. Alderman & Sons Company
ALCOLU, S. C.

WANTED

Good used Steel Storage and Pressure Tanks, also wood tanks, all descriptions. Give detailed description and price in first letter.

NATIONAL PRODUCTS CO.
EAST LIVERPOOL, OHIO

WANTED

CRANE equipped for handling clam shell bucket; with power but without boiler. **HOISTING ENGINE**, single drum, without boiler, to lift about 4500 pounds at 100 feet per minute on single line. **PENSACOLA TAR & TURPENTINE COMPANY**
GULL POINT, FLA.

If you wish to keep posted on the progress of the South, read the **MANUFACTURERS RECORD**
Price \$6.50 a year, six months for \$3.50.

WANTED

Electric Traveling Cranes

5-ton, 40 to 50' span.
10-ton, 40 to 50' span.
3 motor type, 220-volt, D. C., or would consider alternating-current cranes.

MONORAIL HOISTS

5-ton Monorail Hoists, motor-driven, travel cage operated, 3-phase, 60-cycle, 220-volt.

STEAM SHOVELS

Erle type "B" Steam Shovel.
Bucyrus 70-C Steam Shovel.

Address
Box A-1 care Manufacturers Record

Platform Trailers WANTED

Two or three two-ton rubber-tired Platform Trailers, new or second-hand, for immediate delivery, Chillicothe, Ohio.

Henry Knight & Son

Exchange Bldg. Louisville, Ky.

WANTED AT ONCE SECOND-HAND TANK AND TOWER

Tank 50 to 100,000 gal. capacity

MARLBORO COTTON MILLS

McCOLL, S. C.

WANTED

Discarded Canvas or Rubber Belt 18 to 24 inches.

Can be used if considerably worn.

VALLEY FORGE & MINING CO.
BRISTOL TENN.

CAN YOU MAKE CASTINGS?

If so, Let Our Readers Know it
through an advertisement in the

Southern Shops Seeking Contract Work

Department of the

MANUFACTURERS RECORD

The Columbus Iron Works Co., Columbus, Ga., wrote us a short time ago, as follows:

"We are pleased to advise that since running our ad. in 'Southern Shops Seeking Contract Work' department we have all the work we can take care of for the next six months. It certainly pays to advertise."

If your plant is not running at full capacity, an advertisement in this department of the **MANUFACTURERS RECORD** outlining your special facilities will put you in line of securing some of the profitable work which foundries and machine shops in other parts of the country are compelled to sublet because of the greatly overcrowded condition now prevailing.

In these times it is a vital economy of war to keep your plant operating on a 100% capacity schedule, and an advertisement in the **MANUFACTURERS RECORD** may bridge the gap between your present production and your possible production. Try it.

Bargains in Machinery and Supplies.

We have for sale the following which can be seen at our plant, foot of Morris Street, Delaware River, Philadelphia:

1—Robt. Wetherill & Co. 16-in. x 30-in. x 46-in.

CROSS COMPOUND CORLISS ENGINE

with 24-in. x 10-in. Beam Condenser, operated from cross head fly-wheel, 16-ft. dia., 48-in. face capacity, 350 H. P.

1—Robt. Wetherill & Co. 23-in. x 48-in.

TWIN CORLISS ENGINE

with 20-in. x 16-in. Beam Condenser, operated from cross head fly-wheel, 17-ft. dia., 50-in. face capacity, 500 H. P.

1—Woodruff Beach & Co., Hartford, Conn., 12-in. x 36-in.

HORIZONTAL SLIDE VALVE ENGINE

box-bed, with outboard bearing 12-in. x 4-in. balance wheel, 18-ft. dia. x 18-in. face-driven wheel.

1 STEEL STACK

4-ft. dia., 40 ft. high.

BAUGH & SONS COMPANY

Foot of Morris St., Delaware River

PHILADELPHIA, PA.

FOR SALE

4—150 H. P. Hor. Ret. Tub. Boilers, triple riveted, butt strapped, with fronts and fittings.
Price for quick sale \$4200.00 f. o. b. cars Portland, Maine.

ARTHUR DANIELS COMPANY, Inc.

21 Park Row

New York

BOILERS

For Quick Shipment

- 10 250 H. P. Wicks Vertical Water-Tube Boilers, 150 lb. pressure.
- 1 300 H. P. Wicks Boiler, 160-lb. pressure.
- 1 500 H. P. B. & W. Boiler, 150-lb. pressure.
- 2 400 H. P. B. & W. Boilers, 150-lb. pressure.
- 4 250 H. P. B. & W. Boilers, 150-lb. pressure.
- 1 275 H. P. B. & W. Boiler, 150-lb. pressure.
- 2 200 H. P. Heine Boilers, 150-lb. pressure.
- 1 425 H. P. Heine Boiler, 150-lb. pressure.
- 1 400 H. P. Stirling Boiler, 150-lb. pressure.
- 4 72"x18" Tubular Boilers, 125-lb. pressure.
- 4 350 H. P. Stirling Boilers with Superheaters, 200-lb. pressure.
- 4 66"x6" Tubular Boilers, 125-lb. pressure.
- 3 48"x150" Steel Smokestacks.

J. F. DAVIS

1409 Harris Trust Bldg., Chicago, Ill.

POWER EQUIPMENT FOR SALE

- 2—66"x16" H. R. T. Boilers, 100 lbs. steam, full fronts, all fittings and fixtures. Good as new.
- 2—60"x14" H. R. T. Boilers, half-arch fronts, 100 lbs. steam, complete and in good condition.
- 1—90 H. P. C. C. Buckeye Engine.
- 1—18"x22" Potter S. C. Engine, Pickering governor, pulley and flywheel on one end shaft. Excellent condition.

All the above offered at bargains to be moved at once.

The J. G. Tilley Co. INCORPORATED BRISTOL, VA.

For Sale

- 2—66"x20" high-pressure Tubular Boilers.
- 1—72"x20" high-pressure Tubular Boiler.
- 1—250 H. P. Heine Water-Tube Boiler.
- 2—250 H. P. Heine Water-Tube Boilers.

We have a good stock of Boilers, immediately available.

Norton Machinery Co. Cincinnati, Ohio

(2) 150 H. P. Geary Water Tube BOILERS

Insured 150 lbs. with Roney Stokers, Breeching and Stack.

The Herfurth Engine Co., Inc. ALEXANDRIA, VA.

FOR SALE

1-300 H. P. Edgemore Water Tube Boiler.

IMMEDIATE DELIVERY
SCULLY-JONES & COMPANY
Railway Exchange Bldg. CHICAGO, ILL.

FOR SALE

Three 325 B. & W.; one 300 and two 250 H. P. Sterling, all complete; two 275 H. P. Heine Boilers, all good for 150 lbs. steam; two 42 Stacks, 100 ft. each; one Stack 78 and 66" diameter, each 150 ft. long, heavy metal; 1500 ft. Boiler Tubes, 4" diameter, 18 and 16 ft. long, good as new; 15,000 ft. 4" Wrought Pipe, with new threads and couplings; 10x10 Belted Air Compressor; two 12x12 Upright and Horizontal Automatic Engines; 16x36 Slide Valve Engine, \$300; 25 tons each 4 and 6" Cast-iron B. & S. Pipe; two 100 H. P. Horizontal Return Tubular Boilers and six 150 H. P., 125 lbs. steam, butt strapped, complete; two Gasoline Concrete Mixers on wheels, new, \$450 each; 7x12 Saddle-Tank Locomotive, 24" gauge, perfect condition; 16,000 ft. Galvanized and Bright 3/4 Wire Ropes, long and short lengths; 90 reels 1" to 2 1/4 Plow Steel Wire Ropes, long and short lengths, quality and lengths guaranteed; Traction Shovel, with 1 1/2-yard dipper, cheap; 150 tons Cast and Wrought Scrap, located Watertown, N. Y.

EASTON MACHINERY CO. DRAKE BLDG. EASTON, PENNA.

Heating Boilers

1—54"x16" Fire Box Heating Boiler.
1—72"x16" Kewanee Fire Box Heating Boiler.
Fine condition. Practically as good as new. Immediate delivery.

PFANNMUELLER ENGINEERING CO. 1733 First National Bank Bldg. Chicago

BOILERS FOR SALE

3 Walsh & Weldner Horizontal Tubular Boilers, 72" diameter, 16-ft. tubes, 125 lbs. pressure. These boilers are in good condition and can be delivered at once. Price \$1000 each f. o. b. cars.

MARTEL MANUFACTURING CO. EAST POINT, GEORGIA

SET TWIN STEAM ENGINES FOR SALE

14"x20", complete with boiler, sheaves, drums, etc., for incline work.
One 14"x14" Arlington & Sims Engine.
One 18"x22" Erie Engine.
One 16"x20" Smith, Myers & Schnier Engine.
One 10"x18" Sinker-Davis Engine.
One 10"x14" Atlas Engine.
One 18"x42" Hamilton Corliss Engine.
One 20"x20" Harrisburg Engine.
One 18"x26" Jackson Engine.
One 24-ton Pittsburgh American Saddle-Tank Locomotive, 36" gauge.
Two 14-ton Shay Geared Locomotives, 36" gauge.
One 10-ton American Saddle-Tank Locomotive, 36" gauge.
Two Radley & Hunter Safety Stacks.
Two 66"x16" Tubular Boilers.
One 54"x14" Tubular Boiler.
Two 52"x14" Tubular Boilers.
One 30" Fay & Egan Surfer.
One 6"x15" Fay & Egan Surfer, Planer and Matcher.
One S. A. Woods 30" Double Surfer.
Two 6"x15" Berlin Planers and Matchers.
One No. 3 1/2 Fay & Egan Matcher.
Two Wilce Flooring End Matchers.
Two 8" Clark Band Mills.
One Covell Band Saw Sharpener.
One Hanchett Shear and Retoucher.
One 10"x36" Clark Steam Feed.
One 8"x10" 2-drum Lidgerwood Skidding Machine, complete with boiler.
Eight sets Style B Patent Car Stake Pockets.
One Deep-well Pump.
All in good, serviceable condition. For particulars apply
W. M. RITTER LUMBER COMPANY
Columbus, Ohio

Will Accept the First Favorable Cash Offer FOR THIS EQUIPMENT

- 1—300 H. P. Harrisburg Fleming C. C., 15x28x17, 215 R. P. M. Steam Engine.
- 1—100 H. P. Harrisburg Standard Tandem Compound, 10 1/2 x 19 1/2 x 14, 260 R. P. M. Steam Engine.
- 1—Endless Two-Ply Leather Belt, 17"x52" long.
- 1—Worthington Jet Condenser, with 12" steam inlet, 6" water inlet and 9x12x10 duplex pump.
- 1—20 K. W. Ward & Leonard 125-volt, D. C., 400 R. P. M. Generator, direct connected to vertical Forbes steam engine.

Can Make Immediate Shipment

ORLANDO WATER & LIGHT COMPANY ORLANDO, FLORIDA

BOILER FOR SALE

Water Tube Boiler in perfect condition. Size of boiler 330 H. P. on 10 sq. ft. rating. Heating surface 330 sq. ft. One shell 4" diameter, 21' 9" long. Thickness of shell plate 3/4", heads 5/8". Longitudinal seams, double-strapped butt joints. Water leg plates 3/4". Tubes 3/4" diameter, 18" long, 189 in. number.
Maryland Casualty Company inspection. Boiler originally designed for 180 lbs. working pressure.
Price \$22 per H. P. f. o. b. cars East St. Louis, Ill.

MONSANTO CHEMICAL WORKS 1800 S. Second St. St. Louis, Mo.

TWO SECOND HAND BOILERS FOR SALE

6 and 60 horse-power, respectively. In good condition. Will sell small boiler for \$800 and the larger for \$900.

SUHLING & CO., Inc. LYNCHBURG VIRGINIA

FOR SALE

116-in., 255 R. P. M. Buckeye Engine, arranged for belt drive; has new cylinder and governor.
2 sets, 30 sq. ft., Housell Shaking Grates.
4 sets of Common Grate Bars, 5 ft. long, 3/4-in. air space.

J. H. HALM, Supt. CITY OF PERU ILLINOIS

1—40 K. V. A. Westinghouse, oil insulated, self-cooled, outdoor type, single-phase

TRANSFORMERS

6-cyle, 25,000-volt primary, 2500-volt secondary. Delivery after August 15, 1918.

ALABAMA CITY, GADSDEN & ATTALLA RY. CO. Gadsden, Ala.

FOR SALE

One 72"x16" Return Tubular Boiler, with 160 lb. new charcoal iron tubes; boiler is for 125 lbs. pressure and equipped with Murphy furnace.
One 66"x16" Return Tubular Boiler, with 72 lb. new charcoal iron tubes.
General Snow Steam Pumps and lot of 4", 6" and 8" Valves and Fittings.

DUNKIRK LAUNDRY COMPANY Dunkirk, N. Y.

500 H. P. POWER PLANT COMPLETE, \$4500

2—250 H. P., 150-lb. pressure, Water Tube Boilers with Dutch ovens, including all piping, heater and a fine steel stack, 60-inch x 150-foot, or will sell any part.

ROSE ELECTRIC COMPANY 6421 S. State Street Chicago, Ill.

Boilers and Engine For Sale

2—72"x16" Atlas Horizontal Return Tubular Boilers, built for 125 lbs. pressure; insured by Hartford Boiler Insurance Co. for 120 lbs. pressure; complete with stack and full flush front and all standard fittings; can ship in sixty days.

1—14"x36" Hardie-Tynes Corliss Engine; in good condition, for immediate shipment.

LITTLE ROCK FURNITURE MFG. CO. LITTLE ROCK, ARK.

Horizontal Boilers

2—72"x18" H. R. T. "Penna. Boiler Works;" good for about 70 lbs. steam pressure. Good condition.

L. F. SEYFERT'S SONS, Inc.

437 N. 3rd Street PHILADELPHIA

We own and offer for prompt shipment BOILERS

3—300 H. P. Stirling Water Tube Boilers, all fittings and fixtures, 8 years old, F. & C. Inspection, 150 lbs.

1—72x18, 150 H. P. H. R. T. Boiler, all fittings and fixtures, 110 lbs.

1—40 H. P. Ames locomotive-type Boiler, all fittings and fixtures, 100 lbs.

HEATER

1—750 H. P. Erie City Closed Type, 1" brass tubes, all necessary fittings.

STACK

1—54"x80" Guyed Steel Stack, complete with guy wires and cast-iron base.

The Hawkins-Hamilton Co., Inc. Richmond, Va.

W. B. LOUER COMPANY

Construction Machinery and Equipment

GENERAL OFFICES:
Main Floor, Old Colony Bldg.,
Chicago, Illinois

BRANCH OFFICE:
Sheffield,
Alabama

In Stock for Immediate Shipment

- 1—10x12 D.C. D.D. American Hoist & Derrick Company Engine with boiler.
- 1—8½x10 D.C. D.D. American Hoist & Derrick Company Engine with boiler.
- 1—8½x10 D.C. D.D. Lambert Hoisting Engine with boiler.
- 1—New Rex Concrete Mixer, capacity 14' loose material, mounted on trucks with engine, boiler and power loader.
- 2—10x16-36" gauge Davenport Locomotives, in excellent condition.
- 12—4-yard Western 2-way Dump Cars, 36" gauge.
- 1—15 H. P. Novo Gasoline Engine.
- 1—18x11x16 Ingersoll Type 10 Belted Compressor.
- 1—19x12x16 Ingersoll Type 10 Belted Compressor.
- 1—20x12½x16 Sullivan Type WJ Belted Compressor.

We carry a large stock of material both at Chicago and Sheffield

Have you received a copy of Louer's Red Book? A complete catalogue of new machinery which should be on your desk for immediate reference. It is yours for the asking.

1876 THE MACHINERY HOUSE OF THE EAST 1918

FRANK TOOMEY, Inc.

LATHES

- 10"x14" Climax.
- 14"x16" New Carroll Jamieson Quick Change.
- 14"x18" New Carroll Jamieson Quick Change.
- 4-15"x6" New Sidney D. B. G. Quick Change, swing 17".
- 7-17"x8" New National Quick Change.
- 17"x8" New Sidney D. B. G. Quick Change, swing 19".
- 18"x8" Kahn Mayer.
- 18"x8" Schumaker Boye.
- 19"x8" Reed.
- 24"x20" Reed.
- 32"x24" Fay & Scott.
- 24"x18"x24" McCabe Double Spindle.

TURRET LATHES

- 2"x24" Jones & Lamson Geared Head.
- 2-24" Davis Boring and Chucking Lathes.
- 1-5" S. & K. Back Geared Wire Feed.
- 2-No. 1 Bardon & Oliver Hand Screw Machines.

HORIZONTAL BORING MILLS

- 4" Bar Niles Knee Type.
- 2½" Bar Warney & Swasey Knee Type.

MILLERS

- No. 2 Kempsmith New Universal, with vertical attachment.
- No. 1½ Cincinnati Universal.
- No. 1 U. S. New Hand Miller.

SHAPERS

- 4-14" New Steptoe.
- 1-14" Steptoe.
- 6-16" New Steptoe B. G.
- 2-24" New Steptoe B. G.
- 10" Bement Travelling Head.

GRINDERS

- 10"x30" Brown & Sharpe.
- 10"x24" Iroquois.
- 10"x20" Bath.

- No. 1 New Fraser Universal.
- No. 1 New Grand Rapid Universal Reamer and Cutter.
- No. 2 Grand Rapid Universal Reamer and Cutter.
- No. 100 New Wells Universal Reamer and Cutter.
- No. 3 B. & S. Universal Reamer and Cutter.

RADIAL DRILLS

- 42" Niles Plain Cone Drive.
- 30" Universal Plain Cone Drive.
- 42" New Canedy-Otto.

DRILLS

- 38" New Superior Sliding Head.
- 32" New Superior Sliding Head.
- 30" G. & E. Sliding Head.
- 2-28" New Superior Sliding Head.
- 2-25" New Superior Sliding Head.
- 25" New Superior Sliding Head, with tapping attachment.
- 24" New Superior Stationary Head.
- 21" New Superior Stationary Head.

- 20" New Superior Stationary Head.
- 20" New Champion Stationary Head.

HAMMERS

- 350-lb. Sellers Single Frame Steam.
- 250-lb. New Little Giant Belt.
- 4-100-lb. New Little Giant Belt.
- 3-50-lb. New Little Giant Belt.
- 4-25-lb. New Little Giant Belt.

PLANERS

- 36"x36"x8" Gray, two heads.
- 30"x30"x10" Fitchburg, one head.
- 24"x24"x8" Gray, one head.

NUT TAPPERS

- ¾" to 2" Six-Spindle National.
- ¾" to ¾" Five-Spindle National.
- ¾" to ¾" Five-Spindle National.

SLOTTERS

- 10" Newton Power Feed to Rotary Table.

"STEAM AND ELECTRICAL EQUIPMENT"

A. C. OIL ENGINE UNIT

- 1-375 K. W. Fort Wayne, 3-phase, 60-cycle, 2300-volt Alternator, direct connected to one pair of Diesel Vertical Oil Engines.

STEAM TURBINE A. C. SET

- 1-110 H. P. De Laval Steam Turbine, direct connected to two 37½ K. V. A. General Electric, 2300-volt, 60-cycle, 3-phase Alternators, with direct-connected exciter.

MOTORS

- Large stock of A. C. and D. C. Motors, new and used, ½ to 200 H. P.

HORIZONTAL RETURN TUBULAR BOILERS

- 150 H. P. 72"x18" Coatesville, with Murphy Stoker, 125 lbs. steam pressure.
- 4-150 H. P. 72"x18" Vulcan Iron Works, 125 lbs. steam pressure; complete with stacks and steam blower.
- 1-150 H. P. 66"x20" Sotter Bros., 125 lbs. steam pressure.

WATER TUBE BOILERS

- 1-150 H. P. Babcock & Wilcox Water Tube Boiler, 125 lbs. steam working pressure, with 80 ft. of 36" dia. stack, heater, feed-water pump and damper regulator; complete plant.
- 2-250 H. P. Babcock & Wilcox Water Tube Boilers, 150 lbs. steam working pressure.

AIR COMPRESSORS, BELT DRIVEN

- 1-12½x12 Ingersoll-Rand, belt driven, 305 cu. ft. capacity.
- 1-22"x13"x18" Laidlow-Dunn-Gordon, 2-stage, belt driven, duplex, 1140 cu. ft. capacity.

AIR COMPRESSORS, STEAM DRIVEN

- 20"x20"x30" Ingersoll-Sargeant, class "A," straight line, steam driven, 900 cu. ft. capacity.
- 15"x15"x14" Hall Steam Pump Co., steam driven, 800 cu. ft. capacity.
- 12"x12"x12" Laidlow-Dunn-Gordon, 400 cu. ft. capacity.
- 10"x10"x12" Bury, single, straight line, steam driven, 167 cu. ft. capacity.

127-131 North Third St.

PHILADELPHIA, PA.

XUM

Corliss Engines, Water Tube Boilers and Direct Connected Unit

DIRECTED CONNECTED UNIT

- (1) Engine, Rice & Sargeant, Simple, Non-Condensing, 30x48", 750 H. P. Generator, Westinghouse, D. C., 10-pole, 550 V., 90 R. P. M., 500 K. W.

ENGINES

- (3) Allis-Corliss, Simple, Non-Condensing, 30x60".

GENERATORS

- (3) Westinghouse, D. C., 4-pole, 550 V., 500 K. W.

LEATHER BELTS

- (3) 53", 140' long, Double Leather Belts.

BOILERS

- (8) Campbell & Zell Water Tube Boilers, 12 tubes high and 12 tubes wide, nominal rating 275 H. P. each; set in batteries of two each, steam pressure 150 lbs. each.
(1) Campbell & Zell Water Tube Boiler, 9 tubes high and 12 tubes wide, nominal rating 225 H. P., pressure 150 lbs.

PUMPS

- (3) Worthington Duplex Feed, 9"-5 1/4"x10".
(1) Knowles Deep Well, 12"-7 3/4"x36".
(1) Westinghouse 9 1/2" Air Pump.
(2) Centrifugal Circulating, Direct-Driven, 12" Pumps, each driven by a 70 H. P. General Electric 550-volt direct-current motor, speed 500 R. P. M.
(2) Horizontal 13x8" Worthington Dry Vacuum Pumps, direct driven by a 12 H. P. General Electric 500-volt direct-current motor, speed 300 R. P. M.

MISCELLANEOUS

- One (1) Berryman Feed Water Heater, 5"x17".
One (1) Locke Damper Regulator, complete with Damper Operating Mechanism.
One (1) 15-ton Traveling Crane, 70' span, with Hand-Operated Bridge and Hoist.
Two (2) Perfection Oil Filters, 100-gallon capacity each.

BOSTON IRON & METAL CO.

PRATT and FREMONT STS.

BALTIMORE, MD.

Having Just Released From Service, We Offer For Prompt Delivery The Following Machines:

- 7—24" Davis Turret Lathes.
6—18"x8' Superior Engine Lathes, with Compound Rest, Three-Step Cone, Quick-Change Gears.
14"x6' Monarch Engine Lathes, Three-Step Cone, Compound Rest, with Feed Rod, but no Lead Screw.
1—20" Fay & Scott Turret Lathe.
2—20"x8' American Engine Lathe, with Taper Attachment, Compound Rest, arranged for motor drive.
4—6-A "Potter & Johnson" Semi-Automatics, motor driven.
2—14" "Fay Automatics," motor driven.
3—No. 2 Type Sectional Ovens. Inside dimensions 12' wide, 12' deep and 8' high.
4—2 1/4"x26" "Greenlee" Flat Turret Lathes, with oil pump and piping.
1—3 1/4"x40" "Greenlee" Flat Turret Lathe, with oil pump and piping, also No. 4 chucking equipment.

The above are all in A-1 condition. Many of the machines are less than two years old.

We also have a number of other machines that will require overhauling.

Write or wire for a list giving prices and full particulars.

Be sure and send all communications to the following address:

Westinghouse Electric & Mfg. Company

25th Street and Liberty Avenue Dept.

Pittsburgh, Pa.

EQUIPMENT

Immediate Delivery

GENERATING SETS

- 1—20 K. W. D. C. General Electric to Ideal engine.
2—25 K. W. D. C. Thompson & Ryan to McKewen engine.
1—15 K. W. 40-volt Eddy Electric Motor Generating Set.
1—60 K. W. 220-volt D. C. Allis-Chalmers Generator.
1—135 K. W. 240-volt 2-phase Stanley Generator, with engine.

TURBINES

- 3—75 K. W. General Electric Turbine Generators, 250-volt, direct connected.

MOTORS

From 2 to 80 H. P., direct current, 220 volts.

HOISTING ENGINES

- 1—32 H. P. D. C. D. D. Mundy, 8x12, with boiler.
1—20 H. P. Mead-Morrison Bridge Hoist.
1—10 H. P. D. C. S. D. Lambert, Link Motion, 5 1/2x8, and boiler.
1—6 H. P. D. C. S. D. Lidgerwood Hoist, 6 1/4x8, and boiler.
1—40 H. P. S. D., 220-volt, D. C. Lidgerwood Builders' Hoist.
1—8 1/4x10 H. P. S. S. S. D. Lidgerwood with boiler.

COMPRESSORS

- 1—1100-ft. Air, Sullivan. 1—60-ft. Air, Laidlaw D. G.
1—125-ft. Air, Chicago. 1—60-ft. Air, Nagle, new, belted.

ENGINES

- 1—120 H. P. Corliss, Slater. 1—35 H. P. Horizontal.
1—100 H. P. Horizontal, Ames. 2—25 H. P. Horizontal.
1—100 H. P. Horizontal, Taylor. 2—20 H. P. Vertical.
1—50 H. P. Horizontal, Ball. 2—15 H. P. Vertical.

PUMPS

- 1—1000-gal. Knowles Single. 2—Centrifugal.
1—750-gal. Worthington Duplex. 8—Rotary and Triplex.
2—300-gal. Worthington Duplex. 2—Deep Well.

BOILERS

- 2—80 H. P. Return Tubular Boilers, 120 pounds pressure.
3—100 H. P. Return Tubular Boilers, 100 pounds pressure.
1—125 H. P. Return Tubular Boiler, 125 pounds pressure.
2—125 H. P. Return Tubular Boilers, 100 pounds pressure.
3—150 H. P. Return Tubular Boilers, 120 pounds pressure.
1—250 H. P. Sterling Boiler, 120 pounds pressure.
3—80 H. P. Locomotive Boilers, 100 pounds pressure.
2—75 H. P. Locomotive Boilers, 100 pounds pressure.
1—75 H. P. Economic Boiler, 100 pounds pressure.

STACKS

- 1—66-inch x 110-foot, fine condition; many other sizes in stock.

Mallory Machinery Corporation

BALTIMORE, MD.

REBUILT MACHINERY ALL IN STOCK

BOILERS: 2-72x15; 2-72x16; 3-66x16; 1-60x16; 1-54x14; 2-48x16; 2-48x14.

BOILER TUBES: 20,000 ft. 4"; 10,000 ft. 3 1/2"; 5000 ft. 3".

ENGINES: 12x30 Lane & Bodley Corliss; 15x16 Nagle; 14x14 Ideal; 14x16 Buckeye; 14x21 Lane & Bodley; 14x18 Chandler & Taylor; 13x18 Atlas; 11x13 Russell; 11x14 Chandler & Taylor; 9x12 Nagle; 10x12 Erie; 9x14 Allfree; 8x8 Orr & Sem-bower; 6x8 Nagle.

LATHES: 14"x6" Flatlathes; 16"x6" Lodge & Shipley; 15"x4" 9" Sebastian; 16"x6" Reed; 16"x8" Gray.

MOTOR GENERATOR SETS: 1-100 K. W. Allis-Chalmers, 240-volt, 900 R. P. M. Interpole, D. C. Generator on same base with and direct connected to a 145 H. P. Allis-Chalmers 3-phase, 60-cycle, 2300-volt synchronous motor, with direct-connected exciter and three switchboards for controlling; 1-17 1/2 K. W. Bullock, 125-volt, D. C. Generator on same base with and direct connected to a Westinghouse 3-phase, 60-cycle, 850 R. P. M., 220-volt motor, with switchboard for controlling.

GENERATORS-60-CYCLE: 175 K. W. Westinghouse, 3-phase, 2200 volts at 900 R. P. M.; 150 K. W. G. E., 3-phase, 220 volts at 600 R. P. M.; 85 K. W. Allis-Chalmers, single phase, 2200 volts at 900 R. P. M.; 90 K. W. Electric Machinery Co., 3-phase, 2300 volts at 1200 R. P. M.; 75 K. W. Westinghouse, 3-phase, 2200 volts at 720 R. P. M.; 75 K. W. Western Electric, 3-phase, 240 volts at 1200 R. P. M.

MOTORS-3-PHASE, 60-CYCLE: 100 H. P. New G. E., 220 volts, 900 R. P. M.; 2-50 H. P. New G. E., 220-440 volts, 900 R. P. M.; 35 H. P. New G. E., slip ring, 220-440 volts, 1200 R. P. M.; 30 H. P. New G. E., 220 volts, 1200 R. P. M.; 30 H. P. F. & M. rebuilt, 220 volts, 900 R. P. M.; 2-25 H. P. New G. E., 220-440 volts, 1200 R. P. M.; 20 H. P. New G. E., 220 volts, 1200 R. P. M.; 10 H. P. New G. E., 440 volts, 1200 R. P. M.

MOTORS-D. C., 250-VOLTS: 100 H. P. Bullock at 600 R. P. M.; 55 H. P. G. E. at 900 R. P. M.; 30 H. P. Northern at 600 R. P. M.; 20 H. P. Crocker-Wheeler at 750 R. P. M.; 10 H. P. Jantz & Leist at 900 R. P. M.; 10 H. P. Browning at 1000 R. P. M.; 10 H. P. Cincinnati Electric at 1000 R. P. M.; 5 H. P. Triumph at 1350 R. P. M.; 3 H. P. Bullock at 850 R. P. M.; 2-3 H. P. Triumph at 1500 R. P. M. direct connected to swing saws.

POWER PLANT MACHINERY AND ACCESSORIES

Send us your requirements

The Randle Machinery Co. 1734 Powers St., Cincinnati, Ohio

Used Refrigerating Machinery bought, sold and erected.

Some bargains must be moved AT ONCE.

6-ton York Belt Ice Plant, 80 cans, complete; \$1600 f. o. b. cars.

6-ton Remington Refrigerating Plant—belt drive, high and low sides, \$750, complete; f. o. b. Philadelphia.

10-ton Creamery Package Plant, complete; high and low side, horizontal, belt driven, \$1000 f. o. b. Philadelphia.

55-ton Vilter Machine, Corliss drive; perfect condition, cheap.

3-Tubular Boilers, 60", 66" and 72".

Ice Cans, Tank, Filters, Hoists, Condensers, Coolers, Frick Accumulator, Machines (all makes), some steam and belt-driven.

We have three good investment propositions—Ice Plants, Buildings and Business. Bids open for investment.

BERRYMAN'S REFRIGERATING MACHINERY EXCHANGE

The Bourse, PHILADELPHIA, PA.

For Sale

Hoisting Engine

Stationary 8 1/2 x 10 double-cylinder double-drum hoisting engine, with independent swinger; engine 4x6, with 40 H. P. boiler, stiff-leg derrick, 1 1/2-yd. clam-shell bucket, complete; immediate delivery; practically new.

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Baltimore, Md.

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Marine Equipment

One 225 H. P. seagoing tug.

One 1500-ton steel barge.

One floating clam-shell or orange-peel digger with Lambert equipment; immediate delivery.

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MARINE

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Air Compressors (Steam Driven)

1-24"x24"x30" "Rand," Class RC straight-line, capacity 1300 cu. ft.

1-16"x18 1/2"x18" "Ingersoll - Rand," Class A straightline, capacity 629 cu. ft.

1-16"x18"x11"x10" "Sullivan" Compound, type WB-2, capacity 706 cu. ft.

Also a large assortment of both Belt and Steam-driven Compressors, smaller sizes. Write for complete list.

L. F. SEYFERT'S SONS, Inc.

437 N. 3d Street Philadelphia

18"x18 1/2"x24"

AIR COMPRESSOR

CLASS A, HEAVY TYPE

1-S. Piston inlet, steam driven, Equal to new New York delivery.

A. B. CLARK COMPANY

225 Fifth Avenue NEW YORK

SECOND HAND BRICK MACHINERY

FOR SALE—Cheap for Cash

f. o. b. cars Slidell, La., Second-Hand Brick Machinery; Chambers No. 8 Pug Mill, Brick Machine, Automatic Cutter, all good condition. Address

SOUTHERN CREOSOTING CO., Ltd.
Slidell, La.

PUMPING UNITS

FOR SALE

One 10" Centrifugal Pump, directly connected to an American Ball Compound Engine; capable of being used for a total lift of 55 ft. The unit is in good second-hand condition.

CONNELLEY & CO.

401 YALE ST. HOUSTON, TEX.

Pumping Outfit

1-Corliss Engine driven Worthing Duplex Pump, capacity half million gallons.

1-Wetherill Corliss Engine, 12"x24"; cheap before removal.

JOHN M. GREENE

261 Drexel Bldg.

PHILADELPHIA PA.

HARRIS BROTHERS COMPANY, CHICAGO Offer From Stock

Pumps

2-12x20x10x24" Snyder-Hughes Tandem Compound Steam Pumps.

Blower

No. 4 1/2 Root Positive Blower.

Wire Cable

Several thousand feet of Steel Wire Cable, ranging in sizes from 3/4 to 2". Send us a memorandum of your requirements.

Rails

1800 tons 70-lb.
250 tons 85-lb.
90 tons 40-lb.
Complete with angle bars and spikes for immediate delivery.
6 miles 36" gauge Portable Track, with steel ties, 20 and 25-lb.

20" Pipe

15 miles of 20" Spiral Riveted A. & R. Pipe, with flanged compression connections. This pipe is made of No. 8 gauge; is in A-1 condition. Delivery can be made immediately.

Locomotives

2-20" gauge Steam Locomotives.
1-24-ton Shay geared, standard gauge Locomotive.
1-50-ton, 4-wheel, standard gauge Locomotive.
1-60-ton American & Baldwin.
1-65-ton American & Baldwin.
1-6-wheel American Locomotive, 61 and 63-ton, 180 lbs. pressure.

Surface Condensers

1-1400" Wheeler.
3-600" Worthington.
2-500" Worthington.
1-1500" Baragwanath.
1-1200" Baragwanath.

Air Compressors

1-10x10 Laidlaw-Dun & Gordon.
1-18x29x14x24 Laidlaw-Dun & Gordon.
1-8x8x10 Rand.
1-10x16x10x10 Clayton.
1-14x22x14-16 Chicago Pneumatic Tool Co.
20-9 1/2 x 3 1/2 x 10 Westinghouse air-cooled Locomotive Compressors.
2-1200" Ingersoll-Imperial type, low duty, 22x14x16 1/2.
2-12 H. P. Fairbanks-Morse gasoline-driven Air Compressors, 70 cu. ft. cap., 80 lbs. pressure.

Hoisting Engines

1-7x10 double cylinder, single drum Mundy Hoisting Engine, skeleton type.
3-4 1/2 x 6 double cylinder, single drum Stroudsburg Hoisting Engines.
1-8 1/2 x 10 double cylinder, double drum Flory Hoisting Engine, skeleton type.
1-8 1/2 x 10 double cylinder, double drum Russell Wheel & Foundry Co. Engine.
1-Double cylinder, double drum Flory Hoisting Engine, skeleton type, cylinders 8 1/2 x 12.

Electric Traveling Crane

1-Niles Electric Traveling Crane, 46' span, 15-ton cap., with auxiliary hoist 5 ton; has 4 motors, 20 H. P.—one 5 H. P., for main hoist and 3 H. P. for auxiliary hoist; voltage, 220; D. C.

Steel Tanks

1-12,000-gal. Storage Tank.
2-11,000-gal. Storage Tanks.
6-10,000-gal. Storage Tanks.
1-8,000-gal. Storage Tank.
2-6,500-gal. Car Tanks.
2-5,500-gal. Car Tanks.
2-3,000-gal. Car Tanks.
1-8 1/2 x 12' Air Tank; double riveted, 5/8" material.
1-7 1/2 x 10' Air Tank; double riveted, 1/2" material.
1-60"x24" Pressure Tank, 3/4" material.
1-60"x18" Pressure Tank, 7/16" material.
2-60"x14" Tanks; double riveted, 3/4" plate.
25-16"x46" Pressure Tanks.
1-20" dia., 135' high Water Tower Tank, made of plates 3/4", 5/8", 5/16" and 1/4".
Will furnish blueprint upon request.

Power Plant

We offer for quick sale an exceptionally fine 600 H. P. Power Plant, consisting of:
4-72x18" Kroschelle Horizontal Tubular Boilers; triple riveted, butt strapped, 125 lbs. working pressure; complete with full flush front, shaking grates, steam drums, all steam-pipe connections.
1-Complete Sturtevant Mechanical Induced Draft, with fan and direct-connected engine of sufficient capacity for entire battery.
1-Complete Coal-Handling Apparatus, with automatic weighing device, electrically controlled.
Write for full details and blueprint plans.

Our Latest Machinery Bulletin MR-305 sent free on request.

HARRIS BROTHERS COMPANY CHICAGO

Boilers

1-15 H. P. Firebox Boiler, mounted on wheels, with engine on top.

Scotch Marine Boilers

10 Scotch Marine Boilers, various class.

Dump Cars

30 Western & Oliver type, all-steel, 12-yd. Dump Cars, which we offer for sale or lease. These cars are located at various points in the East.

Locomotive Cranes

1-20-ton O. & S., 3-wheel, 4 1/2' boom.
1-40-ton Bucyrus, 8-wheel, 55' boom.
1-2-ton, 4-wheel railway type, 18-volt storage battery Electric Locomotive Crane; boom 15', full revolving, with motors and controllers.
1-15-ton, 8-wheel American.

Hydraulic Riving Outfit

1-Chambersburg 150-ton Hydraulic Riving Outfit, consisting of 1 hydraulic riveter, 12" 8" gap with pump, hydraulic hoist, crane, accumulator and container.

Guillotine Shear

Brand new Covington Guillotine Vertical Gate Shear; capacity 36" between housings; stroke 1 1/2"; shears 1 1/2" plate; clutch control; arranged for motor drive. Will sell with or without motor. Shear is brand new, and is offered for prompt shipment; subject to prior sale.
Wire, or write for full details.

Industrial Dump Cars

150-200" gauge, 1-yd. cap., V-shaped and one-side Dump Cars.
75 flat-top, 20" gauge Industrial all-steel Cars.
118-24" gauge K. & G. Box Cars, 30 cu. ft. cap.
67-24" gauge Atlas Flat Cars.

Steel Buildings

1-Steel Building, 76' clear span, any length up to 600' long, columns 20' to bottom chord.
1-Steel Roof complete, 80' clear span, 340' long, consisting of 17 80' bays, trusses, purlins, wind bracing, etc.
1-Steel Frame Building, 80'x160', consisting of columns, trusses, purlins, window framing, bracing, etc.
1-Flat Roof Steel-Frame Building, 80' clear span, 160' long, 40' columns, all complete.
1-Flat, consisting of 40 76' clear-span Flat Roof Trusses.

Water Pipe

50,000 ft. 1"	15,000 ft. 4"
35,000 ft. 1 1/4"	8,000 ft. 6"
65,000 ft. 2"	2,000 ft. 8"
48,000 ft. 2 1/2"	3,000 ft. 10"
8,000 ft. 3"	1,500 ft. 12"

13,000 ft. 1 1/2" double, extra strong, seamless Steel Tubing; good for 5000 lbs. pressure, fitted with Briggs threads each end, and couplings.

Crushers and Mixers

1 No. 4 Champion portable 4-jaw Stone Crusher, with elevator mounted on wheels, 9"x15" opening.
1 No. McCulley heavy-duty, belt-driven gyratory crusher.
1-1-yd steam-driven chain Belt Mixer.

Direct Connected Outfit

1-Triumph 150 K. W., 250-volt, D. C. Electric Generator, with 16x21 Chase 4-valve engine, complete with switch-board.

Punches and Shears

1-Heavy-duty Gate Shear, with 2" blade, 11" throat, cap. cutting up to 1 1/2" plates, spur gear, 42" dia. by 10" face.
1-40" Rock River Stake Horn Riveter, 1/2".
1-Bement-Miles combined Punch and Shear; depth of throat 22", shears 6x1" flats.
1-Single End Shear, 22" throat.
1-Lennox Rotary Bevel Shear; cuts 1/2" plate.
1-Alligator Shear for 1 1/2-inch plate.
1-Alligator Shear for 2" plate.
1-Alligator Shear for 2 1/2" plate.
1-Wiener Steel Plate I-Beam Shear for 15" I-beams.
1-Single End Punch, 27" throat, 3/4" through 3/4".
1-Plate Splitting Shear, 12" knives for 1/2" plate.
1-Single End Shear, 12" throat; shears 8x1 1/2".
2-Niles 12" boiler-makers' Flanging Clamps.

Overhead Traveling Cranes

1-4-ton, 2-motor Electric Crane, 20' span, 220-volt.
2-75' Steel Plate Girders, equipped complete with 20-ton capacity hand-power trolley.
1-25-ton hand-power Traveling Crane.
1-Hand-operated, 40-ton Crane, 44' 8" span, Cleveland Car Co.

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IRON AND STEEL PULLEYS FOR SALE

Lot of slightly used iron and steel pulleys—all sizes.

Foltz Mfg. & Supply Co.
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QUARRY MACHINERY FOR SALE

We are offering our entire quarry equipment for sale, consisting of two 80 H. P. Boilers (good steam); two Hoisting Engines; two Steam Drills; 3000 ft. 1½" Wire Ropes; Slate Dressing Machines; Steel Wire Ropes; Slate Dressing Machines; Tools of every description necessary to operate a slate quarry.

A. L. PITTS SLATE COMPANY.

Arvonia, Va.

- 1-10x10 Band Imperial, type No. 11, 400 feet, Belted Air Compressor.
- 1-Chicago Pneumatic Portable Gasoline-driven Air Compressor, 190 cu. ft., type H.F.G.
- 1-8" Lawrence Direct-current Pump, direct connected to a 25 H. P., 220-volt G. E. motor, direct current.
- 2-Brown Hoisting Machinery Company 2-yard Clam-Shell, Single-Line Buckets.
- 1-1200 Closed Feed-Water Heater.
- 6-150 H. P. H-T Butt-Strapped Boilers.
- 2-250 H. P. Mosher Water-Tube Boilers, 160 lbs. pressure.

Consolidated Machinery & Wrecking Company

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Humidifier System For Sale

American Moistening Co. system, consisting of 23 of the latest-improved sectional round heads, with all piping connections and one 5x6 triplex power pump. These humidifiers are especially adapted for cotton mills. Will sell same at a bargain price. Good as new.

CAROLINA BAGGING COMPANY
HENDERSON, N. C.

Gas Engine For Sale

Buckeye 14"x15", two cylinders, horizontal, single-acting Tandem Gas Engine, arranged for belting to line shaft. Uncertainty of gas in this section reason for selling.

The Queen City Printing Ink Co.
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FOR SALE

One Brown Corliss Engine, 14x36, in splendid condition.....\$750
Line of Shafting, with bearings.....100
55 ft. Double Leather Belt, 17 in. wide and very good. Solid with engine.....150
One Horizontal Tube Boiler, 60 in. x 18 ft.; 44 lbs. in good condition.....300

Address J. ANDREW CAIN Versailles, Ky.

FOR SALE

One 12"x36" Green Engine in A-1 condition for immediate shipment.

Cocker Machine & Foundry Co.
GASTONIA N. C.

FOR SALE

The following Steel, all new and in good condition:
Two Eye Beams, 7½x15 inches, length 26 feet.
One Eye Beam, 6x12 inches, length 16 feet 4 inches, with 10-inch plate on one side.
One Eye Beam, 5x12 inches, length 14 feet, with 10-inch plate on one side.
One Eye Beam, 4½x10 inches, length 11 feet, with 10-inch plate on one side.

WM. L. GATES Clarksdale, Miss.

SCRAP IRON & STEEL

Avoid trouble by selling to an old-established, reputable concern.
We will pay the maximum prices allowed by the Government on nearly all grades, resting satisfied with the commission the Government allows the consumers to pay brokers as our profit.

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Machine for straightening bent and curved old steel rail, 12 to 50 lbs.

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A large list of necessary equipment from Cleaning Kods, Sewer Jacks to Trenching Machines.
MOORE SIEG CONSTRUCTION CO.
Waterloo, Iowa

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10-INCH SUCTION DREDGE

Operated by Oil Engines
Fairbanks Morse 100 H. P.
Fully equipped 750 feet pipe, pontoons, and necessary fittings all in good condition ready to operate; can furnish crew for immediate work.

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OWEN BURNS Sarasota, Fla.

HIGH SPEED STEAM HOISTING ENGINE

Double-cylinder, single-drum, high-speed Hoisting Engine; built especially for handling material elevators, etc., but suitable for any kind of hoisting or haulage where high speed is desired.
It will hoist 1500 pounds at the rate of 60 feet a minute.
Drum 16 inches in diameter and 23½ inches long between flanges, mounted on the crank shaft, and operated by a cone friction. Cylinder size, 7x10; has a 39x85 boiler and ample brake surface.
Price on request—and it is a real bargain price.
Immediate shipment.

AMERICAN HOIST & DERRICK CO.
ST. PAUL, MINN.

AUSTIN TRENCHING MACHINES FOR SALE OR RENT

1-Gasoline "60", 2 years old, cut 30"x12" trench.
1-Gasoline "60" Special, 2 years old, cut 30"x14" trench.
H. W. CARDWELL CONSTRUCTION CO.
PORT ARTHUR, TEXAS

FOR SALE

One Bucyrus 55-ton Steam Shovel, with 2-yd. dipper, mounted on M. C. B. car. Several rebuilt Oil and Gasoline Stationary and Traction Engines. One J. I. Case Steam Tractor, 30 H. P. on the draw bar, 60 H. P. on belt. Engines, Boilers, Woodworking Machinery.

SIMMONS-BIGGS COMPANY, Inc.
MEMPHIS, TENNESSEE

Thew Shovel FOR SALE

Practically new No. 1 Thew full-circle Steam Shovel, with 1-yard dipper. This shovel is in A-1 condition and will pass any inspection. Delivery at Memphis, Tenn., about August 25.

Two 90-ton Vulcan Shovels, with 2½-yard dippers. Used one year. Price \$4000 each. Northern Wisconsin delivery.

One 70-ton S. G. 2½-yard Bucyrus Shovel, in good order. Chicago delivery.

For price or further details address

National Surface Guard Co.
343 S. Dearborn St.
CHICAGO

Model "31" Marion

Dragline on Caterpillars
Gasoline driven
50 ft. Boom 1-Yd. Bucket
Practically New

Southern States Equipment Co.
NEW ORLEANS

EQUIPMENT FOR SALE

One—1-yard Hayward Orange-Peel Bucket.
One—1½-yard Lidgerwood-Crawford Skid Excavator.
One—9"x14" Baldwin Locomotive, S. T., 36" gauge.
One—Marion Improved "A" 45-ton Steam Shovel, full MCB, with 1½-yard dipper.
Two—55 H. P. R. T. Boilers, 100 lbs., full flush fronts and fittings, 60" stack, 24" dia.
Two—75 H. P. Erie R. T. Boilers, 100 lbs., full flush fronts and fittings.

JOHN M. GREENE

261 Drexel Bldg. Philadelphia, Pa.

1—No. 7½ Austin Gyrotray Crusher.
1—8x12 Mundy D. C., D. D. Hoisting Engine, without boiler.
1—18 cu. ft. Smith Tilting Mixer on trucks, with boiler, engine and batch hopper. Other good used machinery.

R. B. Everett & Company
HOUSTON, TEXAS

TRAVELING CRANE SPECIALIST

1, 2, 4, 5, 7½, 10, 15, 20, 25 tons capacity. Inspection in operation. Immediate shipment. Send your requirements by TELEPHONE to CORTLANDT 1800-2020, or WIRE

N. B. PAYNE
25 CHURCH STREET NEW YORK

NEW MINE LOCOMOTIVES

2 Brand-New Jeffrey 15-ton Haulage Locomotives, 250 volts D. C., two-motor type, single and control, inside wheels, gauge 44", double-end equipment of arc headlights; immediate shipment.

USED LOCOMOTIVES

One 13-ton Jeffrey, 42" gauge, 250 volts D. C., two-motor type, steel-tired wheels, single and control; used only three weeks; an attractive price; immediate delivery.
One 10-ton Jeffrey.
One 10-ton General Electric.
One 13-ton Westinghouse.
All 500 volts D. C., 42" gauge, steel-tired wheels, single and control, armor-clad type, in excellent condition. Each motor has a large allotment of new repair parts that goes with the sale. Immediate delivery is offered on any of these locomotives.

NEW MINE CAR TRUCKS AND IRONS

50 sets for 42" gauge track, Whitney Wonder roller bearing 16" wheel. All iron, complete, ready for body. Brakes to all wheels. 1½-ton capacity level full. Immediate delivery from W. Virginia point.

HOWARD B. PAYNE

1003-4 House Bldg.

PITTSBURG, PA.

DUMP CARS AND LOCOMOTIVES

17—12-yd. Western Dump Cars, excellent condition, each.....\$1050.00
3—Standard Gauge Locomotives:
1—50-ton 6-wheel Switcher.....6000.00
1—55-ton Mogul.....6250.00
1—30-ton 4-wheel Switcher.....5000.00
All excellent condition, ready for immediate service.
THE FRED R. JONES CO., City Hall Square Building, CHICAGO

FOR SALE

BARGAINS IN MACHINERY and SUPPLIES

400 tons 45-lb. Relaying Rails and Angle Bars, 60 tons 30-lb. Relaying Rails and Splice Bars; straight and little worn.
2—72x20 Boilers, 130-lb. pressure.
2—60x16 Boilers, 105-lb. pressure.
1—54x16 Boiler, 95-lb. pressure.
1—54x12 Boiler, 95-lb. pressure.
1—Russell Three-Drum Skidder, 9x11 engine; water tank on separate car.
1—Pile Driver, Flory Mfg. Co., 7x10 engine, on flat car.
1—Adams 16x20 Slide Valve Engine.
1—Skinner 12x15 Engine.
1—43-ton Standard-Gauge Mogul Locomotive.
14 Pairs of 33-inch Car Wheels on 3½x7 journals, about 40,000 lbs. capacity.
17 Pairs 24-inch Car Wheels, 3½x7 journals. Sawdust and Slash Conveyor Chain with cleats; nearly new.
Write for list of Mill Supplies.
All can be seen here.

LUMBER MINERAL CO.
ARBO, MISS.

McMyler Whirley

50' boom, 1½ yd. clam shell, 16" gauge, 9x12 engines, 60" diameter boiler, revolving, in fine condition. Immediate Shipment.
Price \$5,000.00.

WRITE OR WIRE

Moore Bros.

39 South La Salle Street
CHICAGO ILLINOIS

SPECIALS

Lidgerwood 7x10, D. C., D. D. Hoisting Engine, with boom swinger.
Lidgerwood 9x10, D. C., D. D. Hoisting Engine; good as new.
Smith No. 10 Concrete Mixer, gasoline driven, on wheels.
Steel Rails, Locomotives, Cars, Steam Shovels, Trenchers.

E. C. SHERWOOD

50 Church St., New York

IMMEDIATE SHIPMENT

16 H. P. O. & S. D. C., D. D. Hoist, with Boiler; 8½x10 Stroudsburg D. C., S. D. Hoist, with Boiler; No. 2 Vulcan Steam Hammer.
10 H. P. G. E. Motor, A. C., 220-volt, 3-phase; one Oster motor-driven Pipe-Threading Machine, 1" to 4".

T. J. LANE EQUIPMENT CO.
41 Bushnell Bldg. Springfield, O.

HOISTING ENGINE

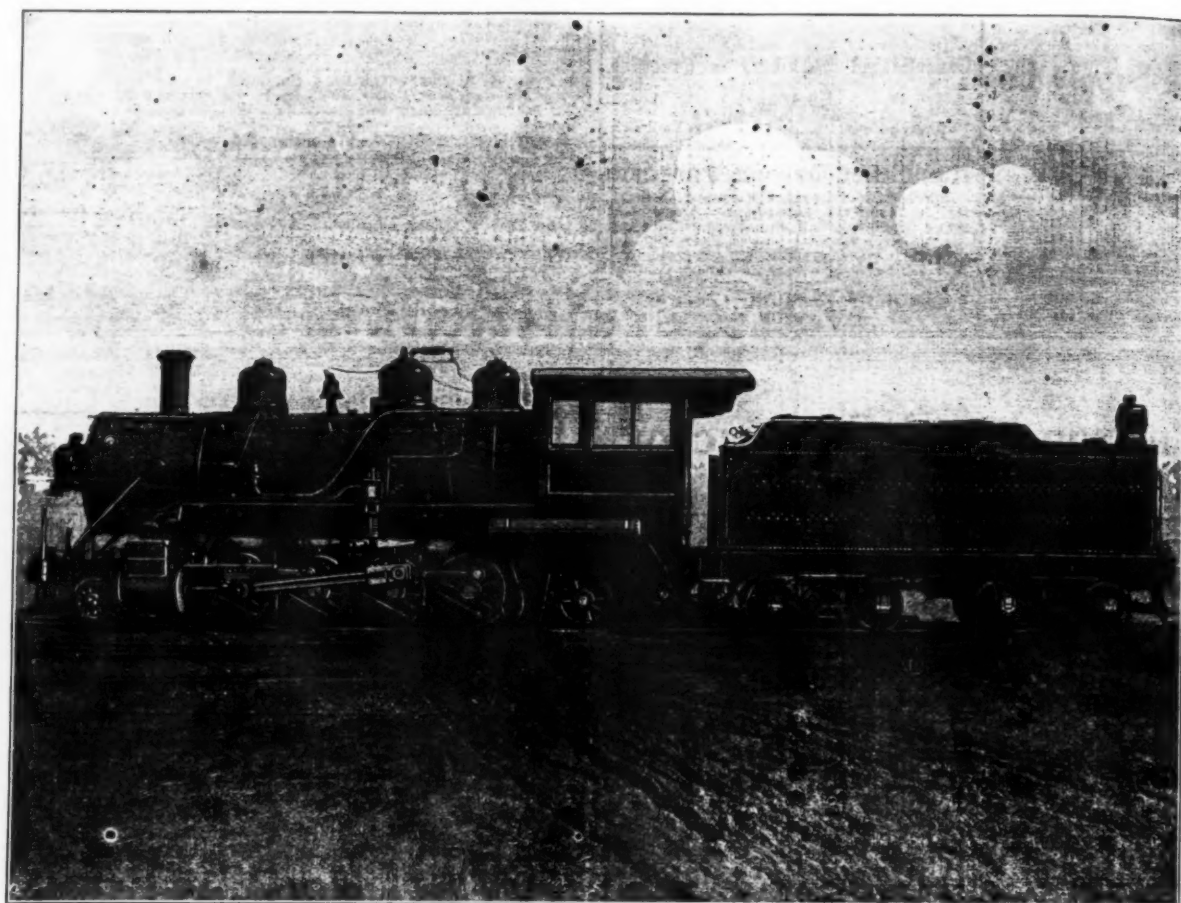
For sale
One 8-horse-power Myers Hoisting Engine, with boiler and stack, in good condition, recently repainted, single cylinder, single drum, reversing type, together with 350' of Cable and Elevator, about 5'x6", in good condition. Price of above equipment complete \$300 f. o. b. cars Huntington, W. Va.

THE H. T. LAMBART CO.
P. O. Box 346 Huntington, W. Va.

FOR SALE

1—Marion Shovel, Model 61.
1—Marion Shovel, Model 60.
1—Standard-Gauge Glover 30-ton Locomotive.
1—Keystone Well Driller.
2—Vulcan 9x14 Locomotives.
1—Standard-Gauge Flat Car.
Southern delivery; all in splendid condition and ready for work.

SOUTHERN MACHINERY & EQUIPMENT CO.
Lynchburg, Va.



BALDWIN MIKADO TYPE LOCOMOTIVE—Class 12-36¹/₄ E 4

Gauge 4' 8¹/₂"
 Cylinders 21x24
 Fuel Soft Coal
 Drivers Diam. 46"
 Working pressure 170 lbs.
 Boiler Diam. 74"
 Type Straight top
 Fire Box ... 120¹/₈" long, 40¹/₈" wide
 Tubes 322, diam. 2". Length 13' 10"

Heating surface { Fire box 187 sq. ft.
 Tubes . . . 2318 sq. ft.
 Total . . . 2505 sq. ft.
 Engine wheels: 4 pairs coupled together. Wheelbase 12'.
 Weight on drivers 131,000 lbs.
 Total engine 167,000 lbs.
 Tender 120,000 lbs.
 Tractive power 33,100 lbs.

Water capacity 6,000 gals.
 Fuel capacity 8 tons
 Limiting conditions: Curves 14 degrees.
 Center bearings. Swiveling trail wheels. Swivel wheels at front.
 Air pump, Westinghouse-American 9¹/₂".

Engine built 1910. Used very little. Carries 170 lbs. steam pressure. Immediate shipment.

Also a large stock of Cars, Rails, Steam
 Shovels, Hoisting Engines,
 Derricks, Concrete
 Mixers, etc.

Attention, Government Contractors
 We cater to Contractors by leasing
 equipment for Government
 work.

Contractors Machinery & Supply Co.
 509 Wabash Building PITTSBURGH, PA.

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 GOOD
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 Two stand
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Special Attention!

LOCOMOTIVE CRANES

FOR PRACTICALLY IMMEDIATE SHIPMENT

- 1—30-ton, 8-wheel Industrial Works Locomotive Crane, 60-ft. boom with 15-ft. and 25-ft. extensions to 100-ft. boom. Right out of our works. Completely overhauled.
- 1—30-ton, 8-wheel Ohio Locomotive Crane, 50-ft. boom, etc. Just like new.
- 1—20-ton 8-wheel McMyler Locomotive Crane, 50-ft. boom, etc. Very fine machine. Right out of our shops.
- 1—15-ton, 4-wheel Browning Locomotive Crane, 38-ft. boom etc., just overhauled, immediate shipment.
- 1—10-ton, 4-wheel Brown Hoist Locomotive Crane, 35-ft. boom, etc., prompt delivery, coming right out of our shops.

Also considerable other equipment. All quotations subject to prior sales. Please telegraph, telephone or write us your requirements.

A. C. TORBERT

Locomotive Cranes, Cars, Locomotives, Steam Shovels, Etc.

Continental and Commercial Bank Building CHICAGO, ILLINOIS
SHOPS AND STORAGE YARDS AT CHICAGO

GOOD LOCOMOTIVES

(Direct from Owners)

Two standard-gauge, 40-ton Baldwin six-wheel Switch Engines. Cylinders 17"x24". Steam pressure 150 pounds. Air brakes. Sloping eight-wheel tenders. Ready for work.

One 19"x20" Baldwin 10-wheeler. Weight on drivers 45 tons. Steam pressure 160 pounds. Just completely overhauled and a bargain.

One 16"x24", 40-ton Passenger Engine. One small standard-gauge Saddle-Tank Engine, about 20 tons.

Get location, price and other details from

NATIONAL SURFACE GUARD COMPANY

343 S. Dearborn St.

Chicago

Cableway For Sale

Specifications of cableway located at San-
sever, Miss.:

1. 3/4" cable about 663' long, with socket and
clips.

2. Cyls for mast and "A" frame.

3. 12" guy cables 197' long, thimbles spliced in.

4. 11" guy cables 123' long, thimbles spliced in.

5. Carrier for 2 1/2" cable.

6. Large down-haul block, "weight about 1200
lbs."

7. Block at mast and 2 blocks at "A" frame
for in and out haul cable.

8. Cypress mast and 2 "A" frames, cypress
poles 60' long, 36" bottom, 24" top.

9. 1 x 1/2" iron box 8'x3'x3'.

10. All cables Hercules Red Strand, made by
Lynch & Sons, St. Louis, Mo.

Cableway as now erected has a span of
60' between centers.

WARD LUMBER CO.

Chamber of Commerce Bldg.
Chicago, Ill.

FOR SALE

Standard Three Wheel Roller
in fine condition. A bargain.

CHAS. I. CASE

Care of Manufacturers Record

TRAILERS For Sale

Three Watson, five-ton, steel and
asbestos lined trailers. Used one
month. Located at Charleston,
West Virginia. Will sell for \$700
each

Atlantic Bitulithic Co.
Richmond, Va.

For Sale

Railroad Contractors' Equipment

Consisting of 3 standard gauge
and 1 36" gauge Locomotives, 1
70-ton and 1 55-ton Bucyrus Steam
Shovels, 60 6-yard standard-gauge
Dump Cars, 2 large Ingersoll Air
Compressors, with boilers and re-
ceivers, etc., etc.

KING CONSTRUCTION CO.
KNOXVILLE, TENN.

FOR SALE

- 1—10-ton Kelly 3-wheel Steam Roller.
- 1—Pulsometer Pump.
- 1—10x20 Acme Stone Crusher, 20' fold-
ing elevator, 50-ton stone bin.
- 1—Aurora 9x16 Stone Crusher, with 24'
folding elevator.
- 1—No. 3 Gyrotary Crusher.

All other kinds of Contractors' Ma-
chinery.

The W. M. T. JOHNSTON COMPANY, Inc.
Third and Vine Sts. CINCINNATI, OHIO

BOILER

40 H. P. Oil Country Locomotive Type, lap-
weld, 44" diameter, 60 3" flues; good for
100 lbs. pressure; complete with 40' 26"
smoke stack, fire grates, but no other
fittings. f. o. b. cars Springfield, O. 3675.

**LOCOMOTIVES, STEAM SHOVELS,
HOISTING ENGINES, TRACK, ETC.**
T. J. LANE EQUIPMENT CO.
SPRINGFIELD, OHIO

HOISTING ENGINES

- 1—Lidgerwood, 14x18, D. C., three tandem drum, suitable for cableway.
- 1—Shannon, 7 1/4 x10, D. C., D. D., with boiler.
- 1—Mundy, 6 1/4 x10, D. C., D. D., skeleton.
- 2—Mundy, 6 1/4 x10, D. C., D. D., with boilers.
- 1—National, 5 1/2 x10, D. C., D. D., with boiler.

STATIONARY ENGINE

- 1—350 H. P. Green Slide Valve Engine, equally as good as new, size
22"x48" wheels 16"x32".

BOILERS

- 3—American-built, Scotch type marine boilers, 12'6" dia. by 20' long,
double end, three corrugated furnaces each end, 160 lbs. steam.
- 1—350 H. P., horizontal return tubular Boiler, 125 lbs. steam.

ANCHORS

- 10—new mushroom Anchors, 5000 lbs. each.

PIPE

- 6000 ft., strictly first class 6" wrought-steel Pipe, equally as good as new.
- 700 ft. strictly first class 20" dia. steel-riveted flange Pipe, lengths 20'
each.
- 400 ft., 24" dia., 30' lengths, equally as good as new.

STEAM SHOVELS

- 1—65-ton Bucyrus, 2 1/2-yd. dipper, standard gauge.
- 1—No. 1 Thew Traction Steam Shovel, 7/8-yd. dipper.

CENTRIFUGAL PUMPS

- 1—Morris No. 12, 14" suction, 12" discharge, direct connected to hori-
zontal engine, 18x10, 4500 gallons capacity per minute.
- 34—Standard gauge car trucks, four wheel; wheels 24" diameter, in
first-class second-hand condition.

RAILS

600 tons strictly first class, 30-lb. relaying rails with 4-hole angle bars.
We have a large tonnage of all weight rails from 20 to 100 lb. relayers;
pass any inspection.

- 1—Logging Engine, size 7x10, D. C., D. D., with boiler.
- 1—36" gauge, 28-ton Climax Locomotive, North Carolina delivery.

Henry A. Hitner's Sons Co.

Station K.

Philadelphia, Pa.

LOCOMOTIVES AND CARS

Immediate Delivery

STANDARD GAUGE

SADDLE TANK TYPE

1—10x14 Davenport	\$2,500.00
1—10x16 Porter	2,500.00
1—11x16 Baldwin	3,500.00
1—14x20 Porter	3,000.00
1—14x20 Porter	2,500.00
1—12x18 Baldwin and tender	4,500.00
1—16x24 Rogers	8,000.00

FORNEY

1—Manhattan	\$4,500.00
1—13x18 Davenport	6,250.00
1—18x24 American	7,500.00

1—20x24 Baldwin Consolidation	\$9,500.00
1—19x24 Baldwin 10-wheeler	8,000.00
1—13x18 Porter Mogul	8,000.00
1—17x24 Rogers Mogul	7,000.00
1—18x24 Rogers Mogul	8,500.00
1—18x24 Penna. 6-wheel Switcher	6,000.00
1—15x22 Penna. 6-wheel Switcher	4,000.00
1—16x24 Baldwin Switcher	4,500.00
2—18x24 Baldwin 10-wheeler	6,000.00
1—14x24 Baldwin 4-wheel	3,500.00

GEARED

1—20-ton Shay—1917	\$3,500.00
1—20-ton Shay—1912	4,500.00
1—18-ton Climax—1908	3,500.00

36" GAUGE

1—10x16 Baldwin Mogul	\$2,000.00
1—14x18 Brooks Mogul	4,500.00
1—13x20 Baldwin Prairie (new)	14,000.00

SADDLE TANK

1—9x14 Davenport	\$1,750.00
1—9x14 Porter 6-wheel switch	2,000.00
7—11x16 Porter (like new)	3,500.00

GEARED

1—20-ton Climax	\$4,000.00
1—10-ton Shay	1,500.00
1—15-ton Shay	1,750.00
1—50-ton Shay	5,500.00

CARS

Standard Gauge

25—60,000 Flat-Bottom Gondolas	(each) \$750.00
20—80,000 Flat-Bottom Gondolas	(each) 750.00
75—6-ton Center-Dump Coal Cars	(each) 75.00
10—50,000 capacity Box Cars	(each) 450.00

LOCOMOTIVE CRANES

1—18-ton O. & S., 8-wheel	\$20,000.00
1—10-ton Browning, 4-wheel	10,000.00
1—No. 1 Thew Shovel, on 4-wheel truck	6,000.00

Also All Weights of Rail

THE GEORGE B. CURD COMPANY

2413 Union Central Building, CINCINNATI

Car and Locomotive Shops, CINCINNATI

Branch Office: 1305 Third National Bank Building, ATLANTA, GA.

Special—Immediate Delivery

MACHINERY FOR MOVING MATERIALS

STANDARD GAUGE LOCOMOTIVES

5—Vulcan 4-wheel 12"x16" Saddle Tanks, weighing 25 tons.
2—American 4-wheel 14"x24" Saddle Tanks, weighing 35 tons.
1—American 4-wheel 17"x24" Slope Tender, weighing 40 tons.
1—Baldwin 4-wheel 18"x24" Slope Tender, weighing 50 tons.
1—American 6-wheel 17"x24" Slope Tender, weighing 45 tons.
1—Baldwin 6-wheel 17"x24" Slope Tender, weighing 55 tons.
2—American Moguls, 18"x24", Square Tender, weighing 55 tons.
1—Baldwin Mogul, 19"x26", Square Tender, weighing 65 tons.
1—American Mogul, 19"x24", Square Tender, weighing 60 tons.

The above locomotives have been thoroughly overhauled.

36" GAUGE LOCOMOTIVES

6—Porter 4-wheel 9"x14" Saddle Tanks, contractors' type.
2—Vulcan 4-wheel 9"x14" Saddle Tanks, contractors' type.
3—Vulcan 4-wheel 10"x16" Saddle Tanks, contractors' type.
6—Porter 4-wheel 11"x16" Saddle Tanks, contractors' type.
1—Baldwin Consolidation 15"x20" Square Tender, weighing 38 tons.
1—American Forney, 10"x16", weighing 25 tons, 2-4-4 type.
2—Vulcan 10-wheel 14"x20" Square Tenders, weighing 35 tons.

STANDARD GAUGE CARS

50—Flat Cars, 50,000-pound capacity, 35' long, M. C. B.
30—Flat Cars, 60,000-pound capacity, 36' long, M. C. B.
42—Gondolas, 80,000-pound capacity, 35' long, M. C. B.
25—Hoppers, 60,000-pound capacity, 28' long, M. C. B.
23—Box Cars, 60,000-pound capacity, 36' long, M. C. B.
2—Steel Flats, 100,000-pound capacity, 40' long, M. C. B.
19—Oliver Dump Cars, 12-yd. capacity, 24' long, M. C. B. air brakes.

RAIL

500—tons 45 and 50-lb. Rail.

We also have several Air Compressors, Air Pumps, Tanks, Rock Crusher, etc. Will rent a large portion of this equipment at reasonable rates.

HOISTING MACHINERY CO., 50 Church St., NEW YORK CITY

HOISTING ENGINES (Steam)

1—Flory, 10"x12", Double Cylinder, Single Drum, without boiler.
1—Flory, 9"x10", Double Cylinder, Double Drum, with boiler.
2—Lidgerwood, 8 1/4"x10", Double Cylinder, Double Drum, with boiler.
2—Stroudsburg, 8 1/4"x10", Double Cylinder, Double Drum, with boiler.
1—Flory, 10"x12", Double Cylinder, Double Drum, with boiler.
4—Lidgerwood, 7"x10", Double Cylinder, Double Drum, without boiler.
3—Mundy, 5 1/2"x10", Double Cylinder, Double Drum, with boiler.
2—Lidgerwood, 6 1/4"x8", Double Cylinder, Double Drum, with boiler.
2—Lidgerwood, 5"x8", Double Cylinder, Double Drum, with boiler.
1—Lidgerwood, 8 1/4"x10", Double Cylinder, Double Drum parallel, without boiler.
1—Crook, 8 1/4"x12", Double Cylinder, Double Drum, without boiler.
1—Mundy, 6 1/2"x12", Double Cylinder, Double Drum, with boiler.
1—American H. & D., 7"x10", Double Cylinder, Double Drum, with boiler.
1—Flory, 7"x10", Double Cylinder, Double Drum, with boiler and swinger.

These hoists are all in fine shape, ready to go to work.

HOISTS (Electric)

1—3-Drum, with swinger, 150 H. P., A. C. motor.
1—3-Drum, with swinger, 75 H. P., D. C. motor.
1—Double Drum, 100 H. P., D. C. motor.
1—Double Drum, 50 H. P., D. C. motor.
2—Double Drum, with swinger, 30 H. P., D. C. motor or A. C. motor.
9—Double Drum, with swinger, 25 H. P., D. C. and A. C. motor.
3—Single Drum, with swinger, 25, 37 and 5 H. P., A. C. motor.

DERRICKS

1—Steel Guy, 66' mast, 54' boom, complete with guys, etc.
1—Steel Guy, 100' mast, 85' boom, complete with all fittings.
1—Steel Stiff Leg, 50' mast, 80' boom, complete with all fittings.
2—Steel Guys, 80' mast, 70' boom, complete with all fittings.

Also several Wooden Stiff-Leg and Guy Derricks and Travelers.

BOILERS

1—150 H. P., locomotive type.
2—85 H. P., locomotive type.
2—40 H. P., locomotive type.
10—165 H. P., vertical type.

Repaired Contractors' Equipment

LOCOMOTIVES

2—15-ton 9x14 36-in. gauge Dinkeys.
2—18-ton 10x16 Dinkeys, 36-in. gauge.
1—Fate Gasoline Locomotive, 3-ton, 36-in. gauge.

CARS

137—4-yard Western Cars, 36-in. gauge, steel and wood beam.

HOISTS, DERRICKS, BOILERS, CONCRETE MIXERS, Etc.

We have a large stock of thoroughly repaired construction equipment of all kinds ready for immediate shipment.

H. Kleinhans Company

Union Arcade
PITTSBURGH, PA.

\$2,000.00
4,500.00
14,000.00

\$1,750.00
2,000.00
3,500.00

4,000.00
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Wanted Rails

80-lbs. 85-lbs.
90-lbs. 100-lbs.

with angles

Wire us what you
have to offer

**The Fishel & Marks
Company**

CLEVELAND, OHIO
Pittsburg Chicago Detroit

Full Revolving Swing STEAM SHOVEL

Ther type 1; working weight 32 tons; 1 1/4-
cable-yard dipper; traction wheels; shop
number 837; new in 1913; ready for immedi-
ate delivery; condition practically as good
as new. Will sell at attractive price or will
rent. Located near New York City.

E. C. SHERWOOD
50 Church Street
New York

RELAYING RAILS

Immediate Stock Shipment, 500 tons of
60-lb. first-class Relaying Rail. Also other
sections. Wire for prices.

M. K. FRANK
Frick Bldg. PITTSBURGH, PA.

The West Va. Rail Co.
HUNTINGTON, W. VA.

Manufactures Light Steel Rails
12, 16, 20, 25, 30, 35, 40, 45 lbs. per yd.
We are also dealers in Relaying Rails
All Sizes.

FOR SALE

Bucyrus 70-ton Shovel, overhauled.
18"x24" Mogul, good as new.
18"x28" 10-wheeler, serviceable.

THE MALES CO.
39 Cortlandt St. New York City

FOR IMMEDIATE DELIVERY

One-Mile Tramway & Equipment

2000-ft. x 1 1/4-in. Locked Coil Track Cable.
1200-ft. x 1 1/4-in. Locked Coil Track Cable.
10,000-ft. x 3/4-in., 6/7 C. C. Steel, Lang Lay.
4000-ft. x 1/2-in., 6/7 Plow Steel, Lang Lay.
20000-ft. x 1-in., 6/7 Scotch Plow Steel, Lang
Lay.
750-ft. x 2-in. 6/10 Plow Steel, Anchor Weights
and Carriages.
1200-ft. x 2-in. Flatwire, C. C. Steel, Anchor
Weights.
10-ton Steel Wire Rope, 3/4 to 1 in.
10-ton Galvanized Guy Rope, 3/4 in. to 1 1/4 in.
200 Steel and Wood Blocks, 6 in. to 20 in.
10 Steel Blocks, New, 18-in. for 1-in. Wire Rope.
10-ton Bridge and Sling Chain, 5/8 in. to 1 in.
2 Ton Mauls, 8 to 30-lb.
1-in. Stone Dogs (Heavy).
All First-Class Second-Hand Condition
Your Inquiries Solicited
John F. Meighan, 865 Third Ave., N. Y. City

Relaying Rails

We have for immediate shipment:
250 tons of 30-lb. Relaying Rails.
150 tons of 35-lb. Relaying Rails.
Complete, with splice bars.
Atlanta (Ga.) delivery.
Write or wire for price.

The Isaac Joseph Iron Co.
525 Reading Road Cincinnati, O.

85-lb.

A. S. C. E. RELAYERS

16,000 tons, with Angle Bars to match. Avail-
able immediate shipment and centrally
located. We positively own these Rails
and offer same in carload lots and over.
25,000 tons Relayers, sizes 25-lb. to 100-lb., in
stock our Pittsburgh yards and vicinity.
Immediate shipment guaranteed and
prices very attractive.
Carload and less carload inquiries and
orders solicited.
Rails cut to length for structural purposes.
Frogs, Switches, Bolts, Nuts, Spikes and
all accessories.

L. B. FOSTER COMPANY
Park Building PITTSBURGH, PA.

Relaying Steel Rails

35-lb., 40-lb., 55-lb., 60-lb., 70-lb., 80-lb., 85-lb.,
and Angle Bars to lay same, also other
weights; and NEW STEEL RAILS, all
weights. We handle first-class Relaying
Rails. We buy Rails fit to relay, and pay
spot cash.

ROBINSON & ORR, Pittsburgh, Pa.
Low Prices on New FROGS and SWITCHES.

NEW RAILS

and TRACK EQUIPMENT

12 lbs. TO 100 lbs. PER YARD

also
FROGS & SWITCHES BOLTS & NUTS
ANGLE BARS TIE PLATES
ETC.

FOR PROMPT SHIPMENT
THE FISHEL & MARKS CO.
CLEVELAND, OHIO
PITTSBURGH, CHICAGO, DETROIT

RELAYING RAIL FOR SALE

Approximately 50 tons 12
lb. relaying rail, 100 tons 16
and 20 lb. relaying rail for
prompt delivery.

SABEL & ROTHCHILD
P. O. Box 503, JACKSONVILLE, FLA.

RAILS

FOR SALE

A large tonnage of rails con-
sisting of all sizes.

Tampa Bag Company
Box 952, TAMPA, FLA.

Crushers In Stock

One No. 8 Gates Gyratory; complete, fine
shape.
One No. 7 1/2 Gates Gyratory; complete.
One No. 5 Gates Gyratory; complete.
One No. 3 Gates Gyratory; complete.
One 11"x22" Acme Jaw Crusher; fine shape.
One 10"x20" Acme Jaw Crusher; fine shape.
One 10"x20" Farrell Jaw Crusher; fine shape.
One 9"x16" Indiana Jaw Crusher on wheels.

CHAS. T. LEHMAN
BIRMINGHAM, ALA.

Locomotive, Steam Shovels, Locomotive Cranes, Cars,
New and Relaying Rails

WE HAVE FOR SALE

40 Standard and 36" gauge modern direct-connected Locomotives in
all types and weights from 8 to 75 tons.
10 Standard and 36" gauge geared Locomotives, all weights.
15 Steam Shovels and Locomotive Cranes of different types and sizes.
3000 tons Relaying Rails, all sizes, on our Birmingham yards.
100 sets 35 and 40-lb. Frogs and Switches, good as new.

Birmingham Rail & Locomotive Co. Birmingham, Ala.

300 tons 30-lb. Relaying Rails

Henry Levis & Co.

Commercial Trust Building
Philadelphia Penna.

RAILS

First-class Relaying in 20, 25, 30, 35,
40, 54, 60, 70-lb.; also Frogs, Switches
and Spikes.

The American Metallic Packing Co.
LEXINGTON, KY.

IMMEDIATE DELIVERY

20-80,000 Capacity Flat Bottom
Gondola Cars 36' long, 9' 4" wide,
meeting all MCB interchangeable
requirements.

Advise by wire or letter if interested

The George B. Curd Company
General Offices and Shops
CINCINNATI
Branch Offices:
Third Nat'l Bank Bldg. Atlanta, Ga.

LOGGING EQUIPMENT FOR SALE

20 log cars standard gauge splendid
condition.
1-40 ton Rod locomotive, standard
gauge.
1 Lidgerwood loader and skidder com-
bined, standard gauge.
500 tons of 56 and 60-lb. rails. Locat-
ed in New England.

Write or Wire for Prices

United American Iron & Steel Co.
750 WOOLWORTH BLDG. NEW YORK

FOR SALE

400 Tons

25-lb. Relaying Rails
Prompt shipment

GEORGE YAMPOLSKY
P. O. Box 305 CLARKSBURG, W. VA.

60 HORSEPOWER

Gasoline Hoisting Engine

8-Cylinder Gasoline Hoisting Engine, 60-
horse-power, corresponding with an 8 1/4 x 10
steam hoisting engine; has two drums and
two winch heads. Drums are 14 inches in
diameter and 27 inches long between flanges.
Has two speeds. Single-line pulling capa-
city 8000 pounds; has Bosch magneto and a
good carburetor; also gasoline tank and
water-cooling tank.
Is provided with clutches which permit
the engine to be started without operating
the hoisting mechanism.
A powerful, well-built engine, on which
we can give immediate shipment.

AMERICAN HOIST & DERRICK CO.
ST. PAUL, MINN.

RAILS

AND

ACCESSORIES

NATIONAL STEEL RAIL CO.

I. H. COHN, Pres. and Genl. Mgr.
1030-32 Pierce Bldg. ST. LOUIS, MO.

RAILS

NEW and RELAYING

Several Sections ready for

IMMEDIATE SHIPMENT

Atlantic Equipment Co.

Singer Bldg. New York

RAILS - RAILS - RAILS

NEW RAILS

16-20-25-40-70-80

RELAYERS

30-35-56-60-65-85

MORRISON & RISMAN

RAIL DEP'T. BUFFALO, N. Y.

NEW FROGS AND SWITCHES

IMMEDIATE SHIPMENT

New Boiler Tubes

From Stock

HYDE & COMPANY, Inc.

331 4th Avenue Pittsburgh

Second-Hand and Rebuilt

RAILROAD CARS

BOX, FLATS, STOCK AND TANKS

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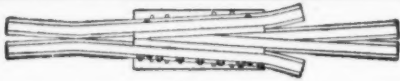
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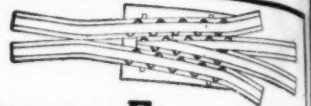
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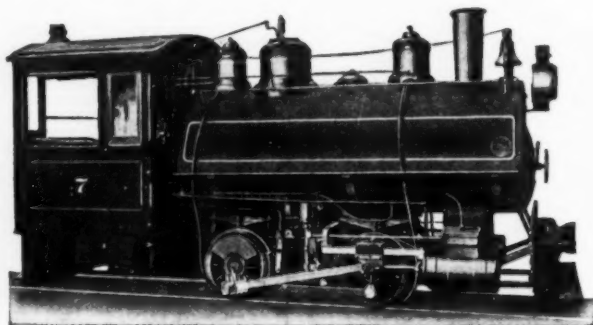
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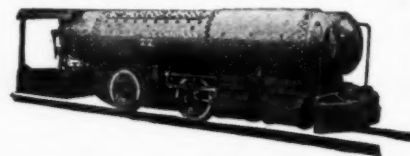
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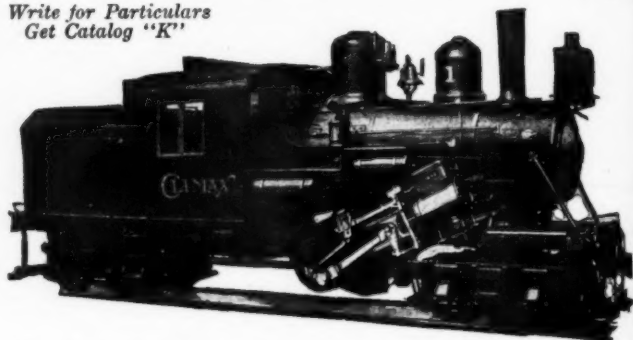
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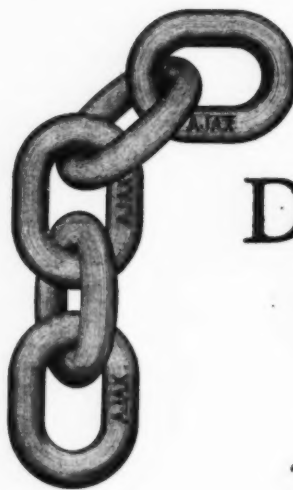
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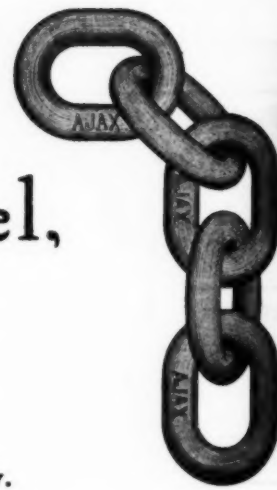
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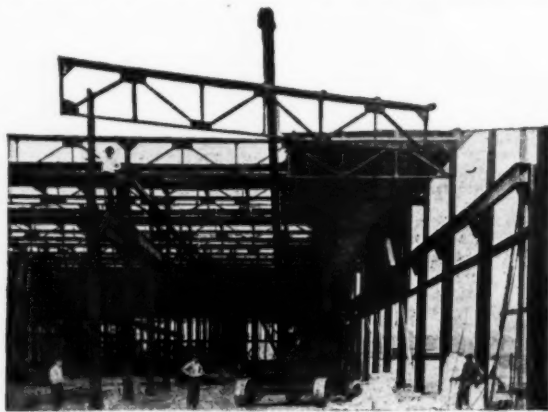
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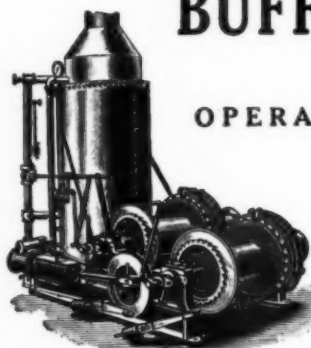
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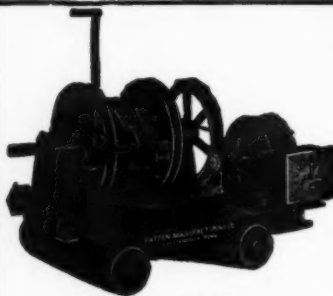
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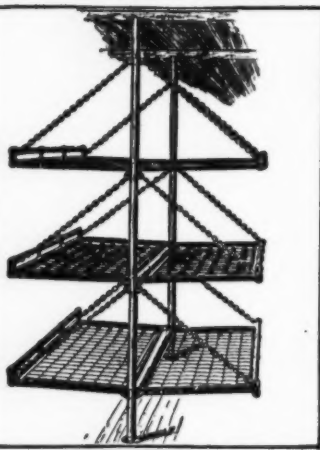
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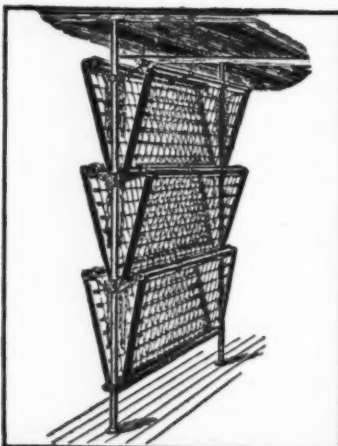
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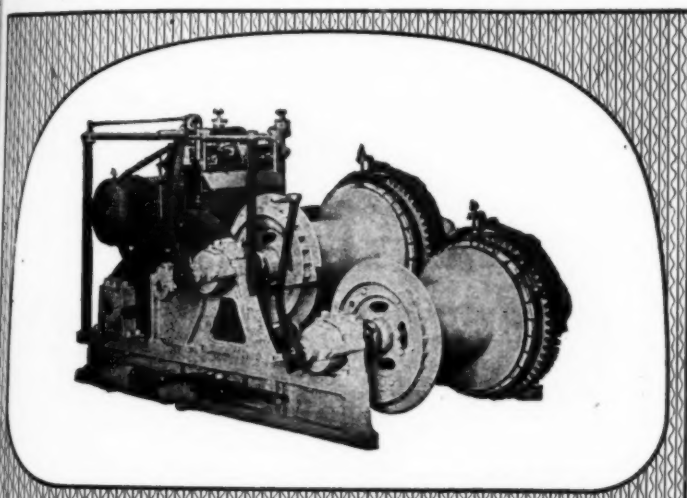
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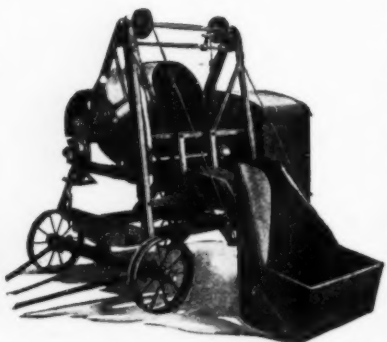
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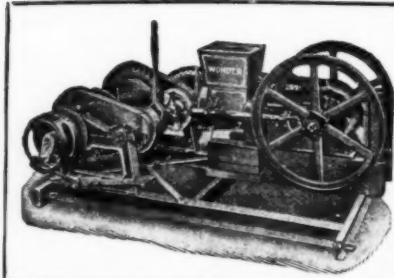
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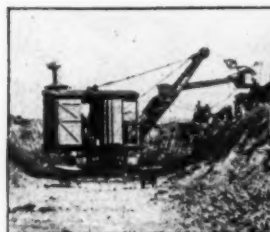


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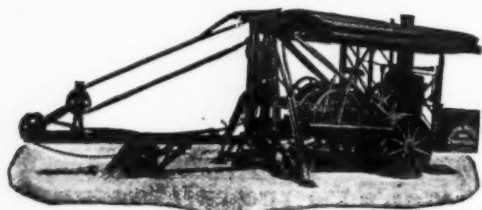
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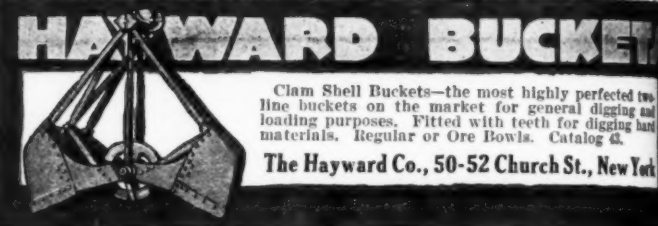
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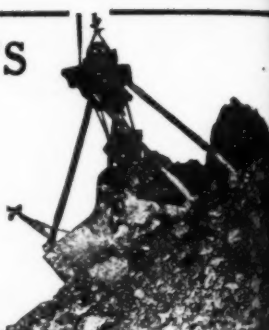
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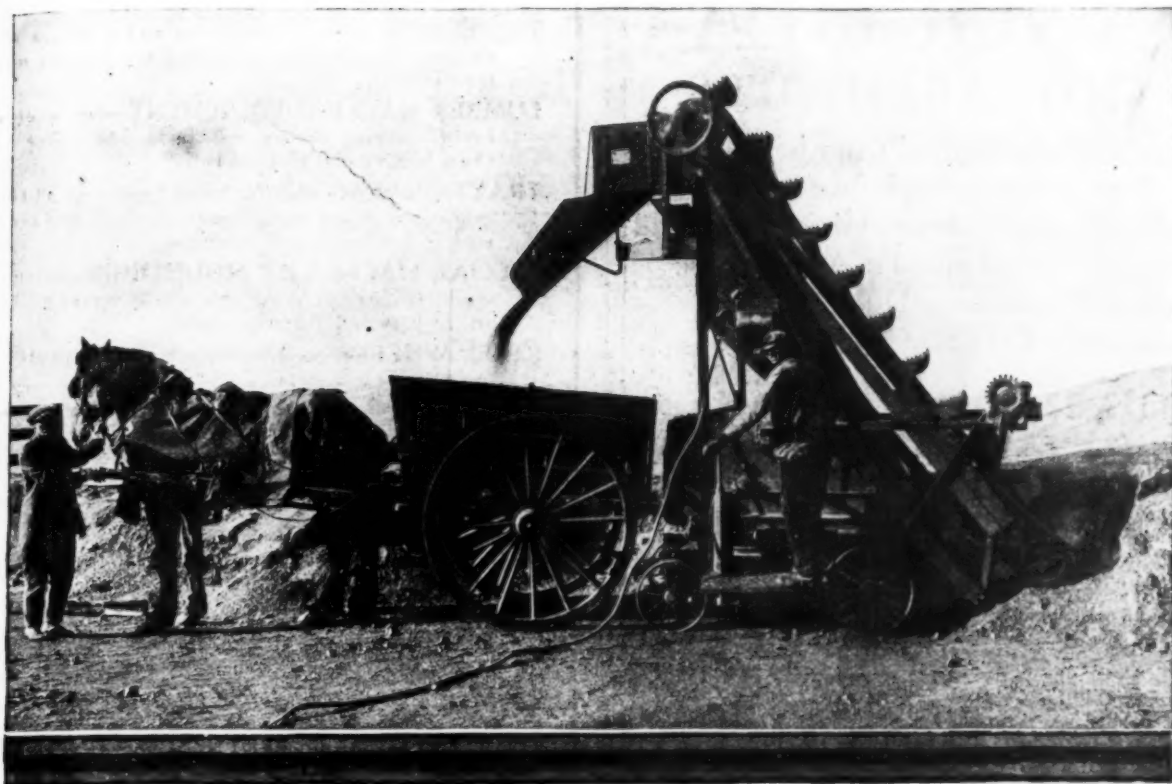
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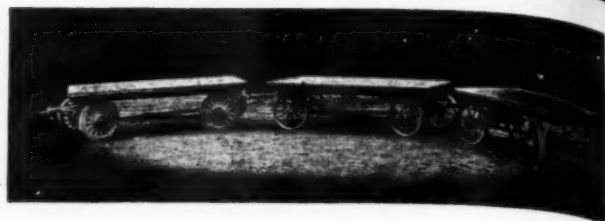
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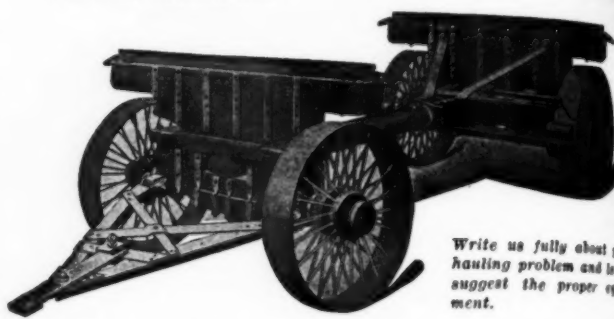
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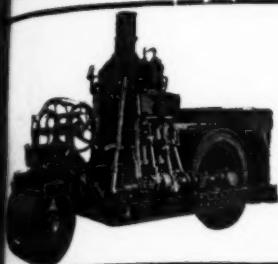
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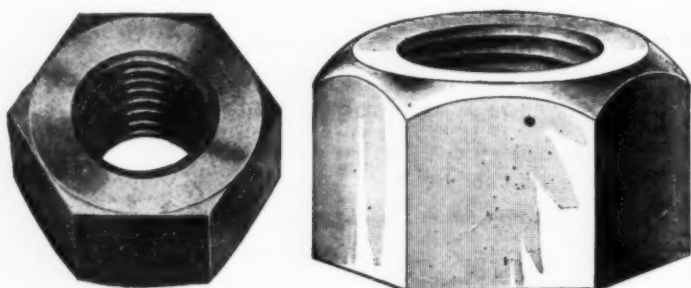
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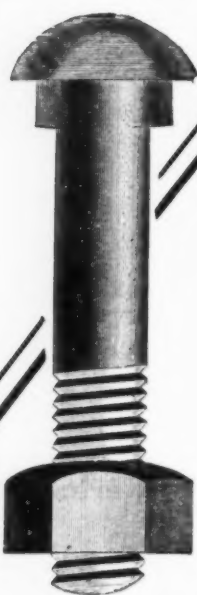
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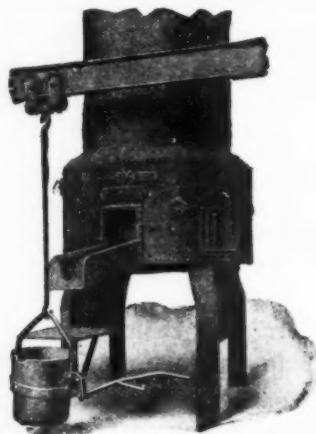
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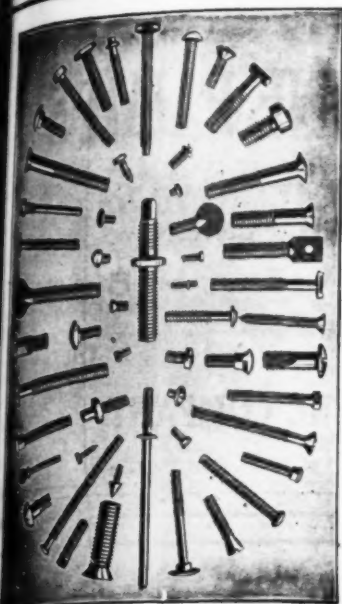
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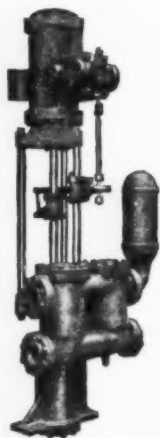
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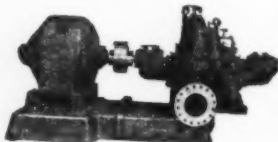
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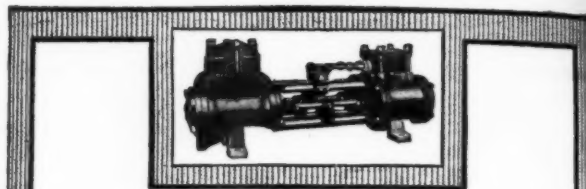
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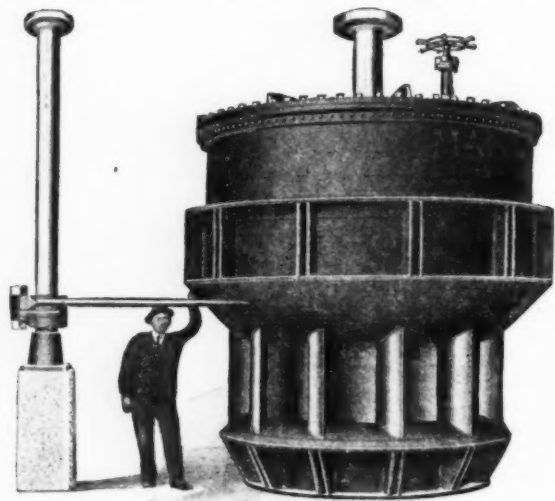
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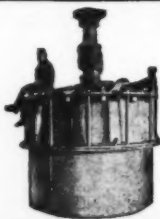
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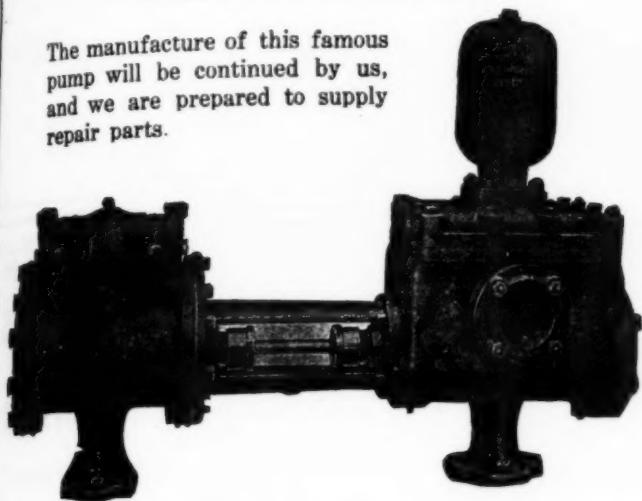
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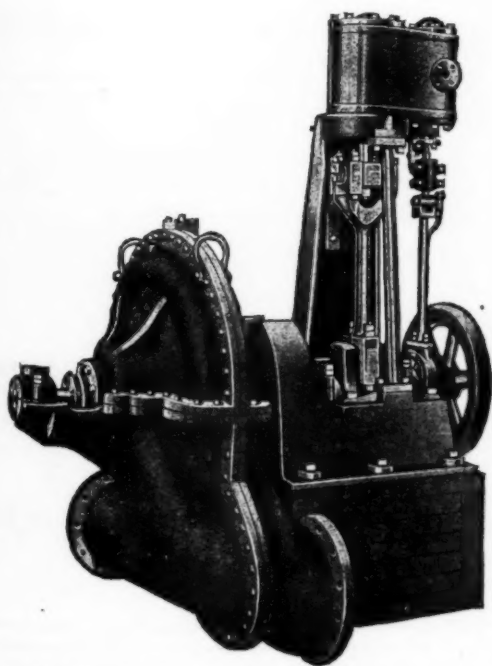
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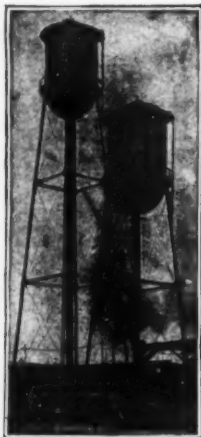
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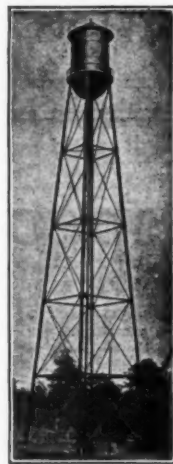
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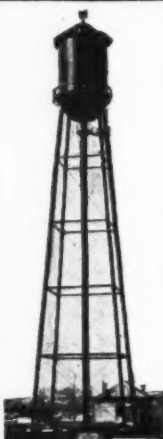


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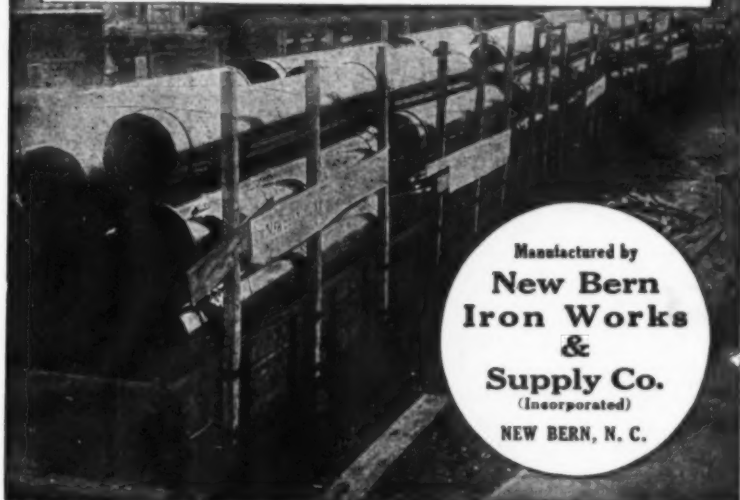
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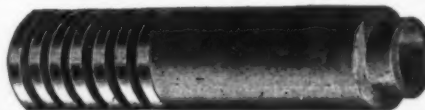
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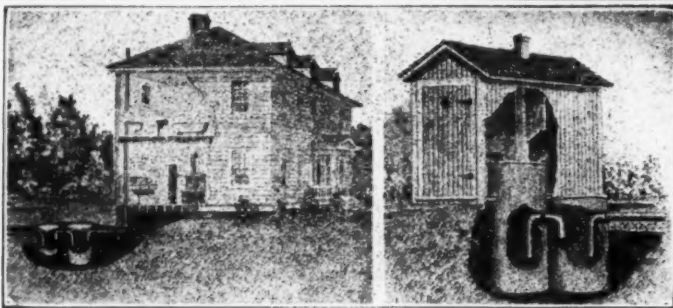
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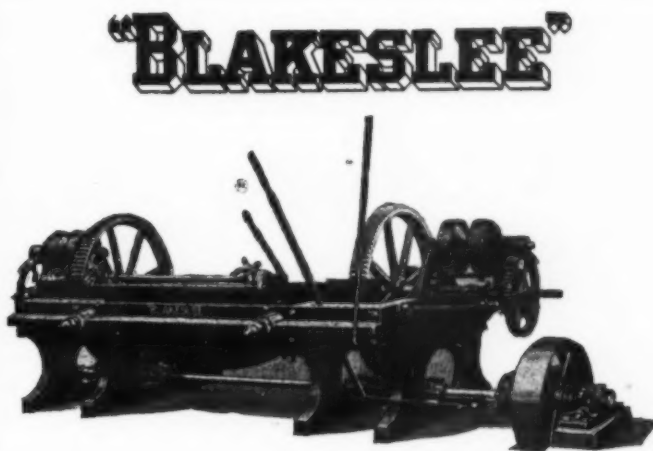
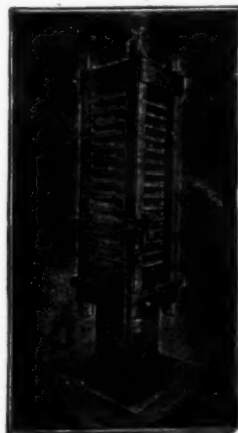
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3—BUILDING MATERIALS: New industries can be assured of quick and low-cost construction because the necessary building materials are manufactured on the Clinchfield Railway, such as high-grade Portland Cement, brick, lime, tile, lumber, etc.

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5—CHEAP POWER: The power resources of the Clinchfield are hardly to be exceeded anywhere in the country. The coal fields being developed on the north end of the road guarantee an ample and continuous supply of coal, coke and gas. In addition to these coal resources the road possesses ample power facilities in the several large rivers that drain this territory.

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"The South of Today is the West of Yesterday." He was discussing the development of Southern agriculture and pointed out the fact that men with the pioneering instinct are beginning to realize that a new field for their endeavors lies in the great undeveloped natural resources of the South.

The Government is calling for the greatest possible food production if we are to win the war. It is the part of the stay-at-homes who are skilled in agricultural pursuits to produce to the limit of their power and endurance. We must feed our Allies and our men on the battle-fronts of Europe if the fight against barbarism is to be successfully waged. No duty can be more sacred; no duty more imperative.

It is a golden opportunity for Florida to take her part in this work. The South is being called upon as never before to help in increasing the Nation's food output. Florida's climate and soil fertility, with vast areas of uncultivated land, send out an invitation to the farmer that promises not only abundant returns from his labor, but a production that will aid in a most substantial way in meeting the present crisis. This invitation, from a State where outdoor work is possible the year 'round, should appeal not only to men of less favored sections, but to the men of our own State for redoubled energy and to place in cultivation every possible square foot of land that can be made to produce.

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BARNS, WIRE, WIRE FABRIC, ETC. (For Reinforced Concrete.)
Cincinnati Iron & Steel Co., Cincinnati, Ohio.
Concrete Steel Co., New York, N. Y.
Corrugated Bar Co., Buffalo, N. Y.
General Fireproofing Co., Youngstown, Ohio.
Hoffman & Co., R. C., Inc., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Laclede Steel Co., St. Louis, Mo.
Trucon Steel Co., Youngstown, Ohio.

BAUXITE.
Southern Minerals Corp., Boston, Mass.

BEARINGS. (Brass and Bronze.)
Edna Brass Mfg. Co., Cincinnati, Ohio.
Wellman Bronze Co., Cleveland, Ohio.

BEARINGS. (Graphite and Bronze.)
Bound Brook Oil-less Brg. Co., Bound Brook, N. J.

BEARINGS. (Oilless.)
Bound Brook Oil-less Brg. Co., Bound Brook, N. J.

BEARINGS. (Roller.)
Metalline Co., Long Island City, N. Y.

BEARINGS. (Roller.)
Hyatt Roller Bearing Co., New York, N. Y.

BELTING.
LEATHER, CANVAS, RUBBER.
Bailley-Lebby Co., Charleston, S. C.
Baltimore Belting Co., Baltimore, Md.
Chesapeake Belting Co., Baltimore, Md.
Cincinnati Rubber Mfg. Co., Cincinnati, Ohio.
Druid Oak Belting Co., Inc., Baltimore, Md.
Gandy Belting Co., Baltimore, Md.
Goodrich Co., B. F., Akron, Ohio.
Goodyear Tire & Rubber Co., Akron, Ohio.
Graton & Knight Mfg. Co., Worcester, Mass.
Main Belting Co., Philadelphia, Pa.
Schieren Co., Chas. A., New York, N. Y.
Smith-Courtney Co., Richmond, Va.

CHAIN.
Caldwell & Son Co., H. W., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Co., Philadelphia, Pa.
More Chain Co., Ithaca, N. Y.

BELT CEMENT.
Du Pont de Nemours & Co., E. I., Wilton, Del.
Graton & Knight Mfg. Co., Worcester, Mass.
Schieren Co., Chas. A., New York, N. Y.

BELT CONVEYORS.
Alvey-Ferguson Co., Inc., Cincinnati, Ohio.
Bartlett & Snow Co., The, C. O., Cleveland, O.
Jeffrey Mfg. Co., Columbus, Ohio.
Robins Conveying Belt Co., New York, N. Y.
Webster Mfg. Co., Tiffin, Ohio.

BELT DRESSING.
Dixon Crucible Co., Joseph, Jersey City, N. J.
Gandy Belting Co., Baltimore, Md.
Graton & Knight Mfg. Co., Worcester, Mass.
Schieren Co., Chas. A., New York, N. Y.

BELT LACING. (Leather.)
Graton & Knight Mfg. Co., Worcester, Mass.
Schieren Co., Chas. A., New York, N. Y.

BERTHS AND BUNKS. (For Ships and Contra.)
Southern-Rome Co., Baltimore, Md.

BICARBONATE SODA. (Sap Stain Lmbr. Dip.)
Church & Dwight Co., New York, N. Y.
Du Pont de Nemours & Co., E. I., Wilton, Del.

BILLETS. (Basic Open Hearth.)
Atlantic Steel Co., Atlanta, Ga.
Gulf States Steel Co., Birmingham, Ala.

BLANK FIXE.
Rollin Chemical Co., Inc., Charleston, W. Va.

BLEACHING MATERIALS.
Wolf & Co., Jacques, Passaic, N. J.

BLOCKS. (Chain.)
Wright Mfg. Co., Lisbon, Ohio.

BLOCKS. (Paving Cressed.)
American Cressote Works, New Orleans, La.

BLOCK FILLERS. (Paving.)
Barrett Co., New York, N. Y.
Standard Oil Co. of La., Baton Rouge, La.

BLOWERS AND EXHAUST FANS.
Buffalo Forge Co., Buffalo, N. Y.
Claxton Fan Co., Kalamazoo, Mich.
Clinton-Pratt Co., The, Cincinnati, Ohio.
Durlin Castings Co., Dayton, Ohio.
General Electric Co., Schenectady, N. Y.
Green Fuel Economizer Co., New York, N. Y.
National Blow Pipe Mfg. Co., New Orleans, La.
Savannah Blow Pipe Co., Savannah, Ga.

BLOW PIPES.
National Blow Pipe & Mfg. Co., New Orleans, La.
Shreveport Blow Pipe & S. I. Wks., Shreveport, La.

BOILERS.
Abendroth & Root Mfg. Co., Newburgh, N. Y.
Ames Iron Works, Oswego, N. Y.
Babcock & Wilcox Co., New York, N. Y.
Cape Fear Machine Works, Wilmington, N. C.
Casey Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Coatesville Boiler Works, Coatesville, Pa.
Davis, J. F., Chicago, Ill.
Erie City Iron Works, Erie, Pa.
Harris Bros. Co., Chicago, Ill.
Hartley Boiler Works, Montgomery, Ala.
Houston, Stanwood & Gamble Co., The, Cinn., O.
Lombard Iron Works, Augusta, Ga.
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.
Machinery Utilities Co., New York, N. Y.
Malby Machinery Co., Jacksonville, Fla.
Mecklenburg Iron Works, Charlotte, N. C.
Murray Iron Works Co., Burlington, Iowa.
Schofield Iron Works, Macon, Ga.
Southern Boiler & Tank Works, Memphis, Tenn.

Union Iron Works, Erie, Pa.
United Machine Works, New York, N. Y.
Valk & Murdoch Co., Charleston, S. C.
Vogt Machine Co., Inc., Henry, Louisville, Ky.
Walsh & Weldner Boiler Co., Chattanooga, Tenn.
Zelnicke Supply Co., Walter A., St. Louis, Mo.

BOILER COVERINGS.
Magnesia Association of America, Phila., Pa.

BOILER GRAPHITE.
Dixon Crucible Co., Joseph, Jersey City, N. J.

BOILER SEAM PROTECTOR.
National Boiler Protector Co., Dayton, O.

BOLTS, NUTS, RIVETS, STUDS, WASHERS.
Ames & Co., W., Jersey City, N. J.
Bethlehem Steel Co., South Bethlehem, Pa.
Fishel & Marks, Cleveland, Ohio.
Frank, Jr., Henry, New York, N. Y.
Hoffman & Co., R. C., Inc., Baltimore, Md.
Midvale Steel & Ordnance Co., Philadelphia, Pa.
Milton Mfg. Co., Milton, Pa.
Progressive Mfg. Co., Torrington, Conn.
Republic Iron & Steel Co., Youngstown, Ohio.
Russell, Burdall & Ward Bolt and Nut Co., Port Chester, N. Y.
Schaper Const. Material Co., New York, N. Y.
Stimpson Co., Edwin B., Brooklyn, N. Y.
Topping Bros., New York, N. Y.

BOLT AND NUT MACHINERY.
Webster & Perks Tool Co., The, Springfield, O.

BOND BUYERS.
Hanchett Bond Co., The, Chicago, Ill.
Hornblower & Weeks, New York, N. Y.
Kilbourne Trust & Deposit Co., Baltimore, Md.
Mississippi Valley Trust Co., St. Louis, Mo.
Norton & Co., John, Chicago, Ill.
Powell, Garard & Co., Chicago, Ill.
Spitzer & Co., Sidney, Toledo, Ohio.
Slayton & Co., W. L., Toledo, Ohio.

BONDS. (Surety, etc.)
Fidelity & Deposit Co. of Md., Baltimore, Md.

BORONIC-COP. FOR GOLD & SILVER. (Shot.)
American Boron Products Co., Reading, Pa.

BORONIC-ALLOYING. (Shot.)
American Boron Products Co., Reading, Pa.

BOTTLING OUTFITS.
Vilter Mfg. Co., Milwaukee, Wis.

BRASS GOODS.
Bailley-Lebby Co., Charleston, S. C.
Buckeye Iron & Brass Works, Dayton, Ohio.
Frank, Jr., Henry, New York, N. Y.
Lunkensheimer Co., The, Cincinnati, Ohio.
Midvale Brass Works, The, Ft. Worth, Texas.

BRASS RAILING AND GRILLES.
Ludlow-Saylor Wire Co., St. Louis, Mo.

BREWERS' MACHINERY.
Vilter Mfg. Co., Milwaukee, Wis.

BRICK.
ACID.
Hood Brick Co., B. Miffin, Atlanta, Ga.
COMMON.
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Miss.
Georgia-Carolina Brick Co., Augusta, Ga.
Kingsport Brick Corp., Kingsport, Tenn.

ENAMELED.
Am. Enamelled Brick & Tile Co., New York, N. Y.

FACE.
Am. Enamelled Brick & Tile Co., New York, N. Y.
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Miss.
Georgia-Carolina Brick Co., Augusta, Ga.
Glasgow Clay Products Co., New York, N. Y.
Hood Brick Co., B. Miffin, Atlanta, Ga.
Hydraulic Press Brick Co., St. Louis, Mo.
Kingsport Brick Corp., Kingsport, Tenn.
Standard Brick Co., Macon, Ga.

FLUE.
Am. Enamelled Brick & Tile Co., New York, N. Y.
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Miss.
Louisville Brick Works, Inc., Highland Pk., Ky.

GLASS.
Stevens Bros. & Co., Stevens Pottery, Ga.
Union Mining Co., Mt. Savage, Md.

PAVING.
Georgia-Carolina Brick Co., Augusta, Ga.
Standard Brick Co., Macon, Ga.

GRATE & CLAYWORK MOCH. & SUPPLIES.
Chase Fdry. & Mfg. Co., Columbus, Ohio.
Fernholtz Brick Machinery Co., St. Louis, Mo.
Freese & Co., B. M., Gallion, Ohio.
Steele & Sons, J. C., Statesville, N. C.

BRIDGES.
CONCRETE.
Blodgett Construction Co., Shreveport, La.
Foundation Co., The, New York, N. Y.

STEEL.
American Bridge Co., New York, N. Y.
Belmont Iron Works, Philadelphia, Pa.
Blodgett Construction Co., Shreveport, La.
Champion Bridge Co., Wilmington, Ohio.
Chesapeake Iron Works, Baltimore, Md.
Foundation Co., The, New York, N. Y.
International Steel & Iron Co., Evansville, Ind.
Richmond Structural Steel Co., Richmond, Va.
Vincennes Bridge Co., Vincennes, Ind.
Virginia Bridge & Iron Co., Roanoke, Va.

BRIDGE AND STRUCTURAL IRON PAINTS.
Chattanooga Paint Co., Chattanooga, Tenn.

BRIMSTONE.
Freeport Sulphur Co., Freeport, Texas.

BUCKETS.
CLAM SHELL.
Buffalo Hoist & Derrick Co., New York, N. Y.
Hais Mfg. Co., Inc., Geo., New York, N. Y.
Hayward Co., The, New York, N. Y.
Owen Bucket Co., The, Cleveland, Ohio.

DREDGING, EXCAVATING, SEWER, ETC.
Buffalo Hoist & Derrick Co., New York, N. Y.
Hais Mfg. Co., Inc., Geo., New York, N. Y.
Hayward Co., The, New York, N. Y.
Insley Mfg. Co., Indianapolis, Ind.
Nonighan Machine Co., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.

GRAB.
Hunt Co., Inc., C. W., West New Brighton, N. Y.
Link-Belt Co., Philadelphia, Pa.

ORANGE PEEL.
Hayward Co., The, New York, N. Y.

ORE HANDLING.
Caldwell & Son Co., H. W., Chicago, Ill.
Hayward Co., The, New York, N. Y.

BUHR STONES.
Starr Co., B. F., Baltimore, Md.

BUILDERS AND CONTRACTORS.
Austin Co., The, Cleveland, Ohio.
Foundation Co., The, Boston, Mass.
Stone & Webster, Inc., Boston, Mass.
Westhouse Church Kerr & Co., New York, N. Y.
White Companies, J. G., New York, N. Y.

BUILDINGS. (Pressed Steel.)
Steel Fabricating Co., Chicago Heights, Ill.
Trucon Steel Co., Youngstown, Ohio.

BUILDING SUPPLIES.
Harris Bros. Co., Chicago, Ill.
Ind. Limestone Quarrymen's Assn., Bedford, Ind.

BUNKS. (For Contractors.)
Southern-Rome Co., Baltimore, Md.

BUSHINGS. (Graphite, Bronze and Wood.)
Bound Brook Oil-less Brg. Co., Bound Brook, N. J.

BUSHINGS. (Oilless.)
Bound Brook Oil-less Brg. Co., Bound Brook, N. J.
Metalline Co., Long Island City, N. Y.

BY-PRODUCTS COKE AND GAS OVEN.
Koppers Co., H., Pittsburgh, Pa.

CABLES. (Copper Wire, etc.)
Broderick & Bascom Rope Co., St. Louis, Mo.

CABLES AND WIRES. (Electric.)
American Steel & Wire Co., Chicago, Ill.
Electric Cable Co., The, New York, N. Y.
McNichol, John P., New York, N. Y.
Roehling's Sons Co., John A., Trenton, N. J.

CABLEWAYS. (Overhead, Suspended.)
Broderick & Bascom Rope Co., St. Louis, Mo.
Flory Mfg. Co., S., Bangor, Pa.
Lidgerwood Mfg. Co., New York, N. Y.

CALCULATING MACHINES.
Barrett Adding Machine Co., Philadelphia, Pa.

CAN AND BOX MAKING MACHINES.
Ames Machine Co., Max, Bridgeport, Conn.
Sillco Co., E. W., Brooklyn, N. Y.

CANVAS PRESERVATIVE AND WATER PROOFING.
Robeson Preservo Products Co., Fort Sumner, N. C.

CARS. (Dump, Industrial, Logging and Light.)
Austin Mfg. Co., Chicago, Ill.
Chase Fdry. & Mfg. Co., Columbus, Ohio.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hunt Co., C. W., Inc., West New Brighton, N. Y.
Inley Manufacturing Co., Indianapolis, Ind.
Kilbourne Trust & Deposit Co., Baltimore, Md.
Light Railway Equipment Co., Philadelphia, Pa.
Over Mfg. Co., Wm. J., Knoxville, Tenn.
Western Wheelbarrow Co., Ames, N. Y.
Whitting Foundry Equipment Co., Ames, N. Y.

CAR UNLOADERS.
Honey Supply Co., Inc., Rochester, N. Y.
Portable Machinery Co., Inc., Passaic, N. J.

CAR WHEELS, AXLES AND TENDERS.
Carnegie Steel Co., Pittsburgh, Pa.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.

CASTERS.
Hamilton Caster & Mfg. Co., The, Hamilton, N. Y.

CASTINGS.
ALLOY STEEL.
Warren Steel Casting Co., St. Louis, Mo.

ALUMINUM.
Aluminum Company of America, Pittsburgh, Pa.
Wellman Bronze Co., Cleveland, O.

BRASS / ND BRONZE.
Bethlehem Steel Co., South Bethlehem, Pa.
Bowditch & Mch. & Fdry. Co., Ames, N. Y.
Eagle Iron Works, Norfolk, Va.
Edna Brass Mfg. Co., Cincinnati, Ohio.
McKenna Brass & Mfg. Co., Inc., Philadelphia, Pa.
Salem Iron Works, Winston-Salem, N. C.
Savannah Iron & Metal Co., Savannah, Ga.
Wellman Bronze Co., Cleveland, O.

ELECTRIC FURNACE STEEL.
Henderson Iron Works, Shreveport, La.
Treadwell Engineering Co., Easton, Pa.
Warren Steel Casting Co., St. Louis, Mo.

GRAY IRON.
American-Blakeslee Mfg. Co., Birmingham, Ala.
Bowditch & Mch. & Fdry. Co., Ames, N. Y.
Cape Fear Machine Works, Wilmington, N. C.
Charlotte Pipe & Fdry. Co., Charlotte, N. C.
Chattanooga Rfg. & Fdry. Co., Chattanooga, Tenn.
Columbian Iron Works, Chattanooga, Tenn.
Durham Fdry. & Mch. Wks., Durham, N. C.
Georgia Car & Locomotive Co., Atlanta, Ga.
Glasgow Pipe & Foundry Co., Lynchburg, Va.
Hammond-Byrd Iron Co., Birmingham, Ala.
Hardie-Tykes Mfg. Co., Birmingham, Ala.
Janney & Co., Montgomery, Ala.
National Cast Iron Pipe Co., Birmingham, Ala.
Raleigh Iron Works Co., Raleigh, N. C.
Roanoke Iron & Bridge Wks., Inc., Roanoke, Va.
Savannah Iron & Metal Co., Savannah, Ga.
Southern Fdry. Co., Owensboro, Ky.
S. C. East Iron Pipe & Fdry. Co., Burlington, Va.
Valk & Murdoch Co., Charleston, S. C.
Vogt Bros. Mfg. Co., Louisville, Ky.
Wilmington Iron Works, Inc., Wilmington, N. C.

MALLEABLE IRON AND STEEL.
Mal-Gra Casting Co., Cambridge City, Ind.
Missouri Malleable Iron Co., East St. Louis, Mo.

SEMI-STEEL.
Bowditch & Mch. & Fdry. Co., Ames, N. Y.
Janney & Co., Montgomery, Ala.
Raleigh Iron Works Co., Raleigh, N. C.
Salem Fdry. & Mch. Wks., Salem, N. C.
Vogt Bros. Mfg. Co., Louisville, Ky.

STEEL.
Bethlehem Steel Co., South Bethlehem, Pa.
Crucible Steel Castings Co., Lansdown, Pa.
Henderson Iron Works, Shreveport, La.
Hoffman & Co., Inc., S. G., Baltimore, Md.
Riverside Steel Casting Co., Newark, N. J.
Treadwell Engineering Co., Easton, Pa.
Warren Steel Casting Co., St. Louis, Mo.

CAUSTIC SODA APPARATUS.
Warner Chemical Co., New York, N. Y.

CEILINGS. (Metal.)
Berger Mfg. Co., Canton, O.
Edwards Mfg. Co., Cincinnati, Ohio.
International Steel & Iron Co., Evansville, Ind.
Milwaukee Corrugating Co., Milwaukee, Wis.

CEMENT. (Portland.)
Clinchfield Portland Cem. Corp., Kingsport, Tenn.
Dixie Portland Cement Co., Chattanooga, Tenn.
Southern States Port. Cem. Co., Roanoke, Va.
Standard Port. Cem. Co., Birmingham, Ala.

CEMENT GUN.
Cement Gun Co., Inc., Allentown, Pa.

CEMENT GUN WORK.
Cement Gun Co., Inc., Allentown, Pa.

CEMENT MACHINERY.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Bradley Pulverizer Co., Allentown, Pa.
Fuller-Lehigh Co., Fullerton, Pa.
Traylor Eng. & Mfg. Co., Allentown, Pa.

CHAIN BLOCKS.
Ford Chain Block & Mfg. Co., Philadelphia, Pa.
Wright Mfg. Co., Lisbon, O.

CHAINS.
DREDGE, QUARRY, STEAM SHOVEL.
American Chain Co., Bridgeport, Conn.
Topping Bros., New York, N. Y.

SPROCKET.
Link Belt Co., Philadelphia, Pa.
Webster Mfg. Co., Tiffin, Ohio.

CHANNELLERS.
Ingersoll-Rand Co., New York, N. Y.

CHAPLETS.
Fanner Mfg. Co., The, Cleveland, O.

CHEMISTS, CHEMICAL ENGINEERS.
ANALYTICAL.
Davis, Geo. C., Philadelphia, Pa.
Fort Worth Laboratories, Fort Worth, Tex.
Freobling & Robertson, Richmond, Va.
Hunt & Co., Robert W., Chicago, Ill.
Inst. of Industrial Research, Inc., Wash., D. C.
Little Co., Inc., Cambridge, Mass.
Meade & Co., Richard K., Baltimore, Md.
Mims, J. C., New Orleans, La.
Nelson, Jr., Wm. F., New Orleans, La.
Pittsburgh Testing Laboratory, Pittsburgh, Pa.
Sadtler & Son, Samuel P., Philadelphia, Pa.
Wiley & Co., Baltimore, Md.

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Worthington Pump & Mchry. Corp., New York, N. Y.
Williams Pat. Crusher & Pulv. Co., Chicago, Ill.
CULVERT FORMS. (Collapsible.)
Storms Mfg. Co., Chicago, Ill.
CULVERT PIPE.
CAST IRON.
American Cast Iron Pipe Co., Birmingham, Ala.
Cast Iron Pipe-Publicity Bureau, New York, N. Y.
Glanorum Pipe & Foundry Co., Lynchburg, Va.
U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.
Wood & Co., R. D., Philadelphia, Pa.
CULVERTS. (Corrugated Metal.)
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Armco Iron Cul. & Flume Mfg. Ass., Cincinnati, O.
Canton Culvert & Silo Co., The, Canton, O.
Tennessee Metal Culvert Co., Nashville, Tenn.
CURB PROTECTOR. (Steel.)
TrustCo Steel Co., Youngstown, Ohio.
CUTTER GRINDERS.
Vitified Wheel Co., Westfield, Mass.
CUTS. (Half Tone, Line, etc.)
Alpha Photo Engraving Co., Baltimore, Md.
CYANIDE PLANT EQUIPMENT.
Pacific Tank & Pipe Co., San Francisco, Cal.
DERRICKS AND DERRICK FITTINGS.
Beckwith Machinery Co., Pittsburgh, Pa.
Byrns Mach. Co., The, John F. Havenra O
Buffalo Hotel & Derrick Co., New York, N. Y.
Hayward Co., Erie, N. Y.
Inlay Manufacturing Co., Indianapolis, Ind.
Monaghan Machine Co., Chicago, Ill.
DESIGNERS AND ILLUSTRATORS. (Printed Matter.)
Alpha Photo Engraving Co., Baltimore, Md.
DESKS. (Factory and Public Schools.)
American Seating Co., Chicago, Ill.
DIAMONDS. (For Mechanical Purposes.)
Desmond-Stephen Dresser Co., The, Urbana, O.
DITCHING MACHINERY.
Ball Englee Co., (Erie Steam Shovel Co.) Erie, Pa.
Bay City Dredge Works, Bay City, Mich.
Buckeye Traction Ditcher Co., Findlay, Ohio.
Fairbanks Sizing & Shovel Co., Marion, O.
Hayward Co., The, New York, N. Y.
Monaghan Machine Co., Chicago, Ill.
Osgood Co., The, Marion, O.
Saunders Bros., Chicago, Ill.
DOORS AND SHUTTERS. (Steel Rolling.)
Detroit Steel Products Co., Detroit, Mich.
DOORS. (Steel Rolling, Etc.)
Edwards Mfg. Co., Cincinnati, O.
Klinegar Mfg. Co., Columbus, O.
David Lupton's Sons Co., Philadelphia, Pa.
DOUBLE BEAMERS.
Ams Machine Co., Max, Bridgeport, Conn.
DRAFTSMEN'S SUPPLIES.
Weber & Co., F., Philadelphia, Pa.
DRAG SAWS. (Gasoline.)
Chicknaww Copperage Co., Memphis, Tenn.
DREDGING. (River, Harbor Improvement.)
Atlantic, Gulf & Pacific Co., New York, N. Y.
DRIERS.
Bartlett & Snow Co., The, C. O., Cleveland, O.
Machinery Utilities Co., New York, N. Y.
DRILLING CONTRACTORS.
Pennsylvania Drilling Co., Pittsburgh, Pa.
DRILLS.
ELECTRIC.
Independent Pneumatic Tool Co., Chicago, Ill.
PNEUMATIC.
Independent Pneumatic Tool Co., Chicago, Ill.
PROSPECTING.
Ingersoll-Rand Co., New York, N. Y.
ROCK AND MINING.
Ingersoll-Rand Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Sullivan Mchry. Co., Chicago, Ill.
TWIST.
McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.
DROP FORGEINGS.
American Spiral Pipe Works, Chicago, Ill.
Lakeside Forge Co., Erie, Pa.
DROP FORGING MACHINERY.
Bliss Co., E. W., Brooklyn, N. Y.
DRUMS. (Steel.)
Standard Tank Co., New York, N. Y.
DRY DOCKS. (Builders of.)
American Bridge Co., New York, N. Y.
Foundation Co., The, New York, N. Y.
DRYING APPARATUS.
Carrier Engineering Corp., New York, N. Y.
DRYING MACHINERY.
American Process Co., New York, N. Y.
Bailey-Libby Co., The, Charleston, S. C.
Bartlett & Snow Co., The, C. O., Cleveland, O.
Buffalo Forge Co., Buffalo, N. Y.
Clargue Fan Co., Kalamazoo, Mich.
Cottleville Boiler Works, Cottleville, Pa.
Hersey Mfg. Co., South Boston, Mass.
Louisville Drying Mchry. Co., Louisville, Ky.
Ruggles-Coles Engr. Co., York, Pa.
DRY KILNS.
Buffalo Forge Co., Buffalo, N. Y.
Moore Dry Kiln Co., L., Jacksonville, Fla.
DRY KILN EQUIPMENT.
Moore Dry Kiln Co., L., Jacksonville, Fla.
DUMBWAITERS. (Hand Power.)
McKenna Brass & Mfg. Co., Inc., Pittsburgh, Pa.
Snyder Co., Owen T., Columbus, Ohio.
Speldel, J. G., Reading, Pa.
DUMP BOXES.
Everett Mfg. Co., Newark, New York.
DUMP WAGONS.
Western Wheeled Scraper Co., Aurora, Ill.
DUST-COLLECTING SYSTEMS.
Buffalo Forge Co., Buffalo, N. Y.
Savannah Blower Pipe Co., Savannah, Ga.
Shreveport Blow Pipe & S. I. Works, Ltd
Shreveport, La.
DUSTPROOFING. (Concrete.)
Sonnenborn Sons, Inc., L., New York, N. Y.
DYESTUFFS.
Wolf & Co., Jacques, Passaic, N. J.
DYNAMITE. (Industrial and Agricultural.)
Aetna Explosives Co., Inc., New York, N. Y.
Atlas Powder Co., Wilmington, Del.
Du Pont de Nemours & Co., E. I., Wilmington, De.
DYNAMOS AND MOTORS.
General Electric Co., Schenectady, N. Y.
Pan Electric Mfg. Co., St. Louis, Mo.
Wagner Elect. Mfg. Co., St. Louis, Mo.
Westhouse Elec. & Mfg. Co., S. Pittsburgh, Pa.
Western Electric Co., New York, N. Y.
EJECTORS. (Sewage.)
Lunkenheimer Co., The, Cincinnati, Ohio.
ELECTRIC FUSES. (Renewable and Non Renewable.)
Economy Fuse & Mfg. Co., Chicago, Ill.
ELECTRIC LIGHTING FIXTURES.
Mitchell, Vance Co., Inc., New York, N. Y.
ELECTRIC MACHINERY. (Dynamos, Generators, Motors, etc.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Blount & Co., J. I., Birmingham, Ala.
Carroll Electric Co., Washington, D. C.
Doubleday-Hill Electric Co., Washington, D. C.

XUM

ELIOTT ELECTRIC CO., Cleveland, Ohio.
General Electric Co., Schenectady, N. Y.
Gregory Electric Co., Chicago, Ill.
Klein & Co., Nathan, New York, N. Y.
Lincoln Electric Co., Cleveland, Ohio.
Monarch Electric Motor Co., New York, N. Y.
O'Brien Machinery Co., Philadelphia, Pa.
Pan Electric Mfg. Co., St. Louis, Mo.
Piedmont Electric Co., Asheville, N. C.
Sachsenmiller & Co., Geo., Philadelphia, Pa.
Stewart, S. J., Electric, New Orleans, La.
Wagner Electric Mfg. Co., St. Louis, Mo.
Western Electric Co., New York, N. Y.
Westhouse Elect. & Mfg. Co., E. Pittsburgh, Pa.
Wilson Machinery Co., St. Louis, Mo.

ELECTRICAL CONTRACTORS' INSTRUMENTS AND SUPPLIES.

Booth Felt Co., Inc., Brooklyn, N. Y.
Carroll Electric Co., Washington, D. C.
Douglas Hill Electric Co., Washington, D. C.
General Electric Co., Schenectady, N. Y.
Piedmont Electric Co., Asheville, N. C.
United Machine Works, New York, N. Y.
Weston Electrical Instrument Co., Newark, N. J.

ELECTRICAL CONDUITS.

National Metal Molding Co., Pittsburgh, Pa.

ELECTRICAL MACHINERY REPAIRING.

(Motors, Generators, etc.)
Charlotte Elec. Repair Co., Charlotte, N. C.

ELECTRIC LIGHT PLANTS. (Portable.)

Edison Storage Battery Co., Orange, N. J.
Lucy Mfg. Co., New York, N. Y.

ELEVATORS.

Automatic.
Mathews Gravity Carrier Co., Ellwood City, Pa.

ELECTRIC.

American Elev. & Mch. Co., Inc., Louisville, Ky.
E. C. Elevator Mfg. Co., Kansas City, Mo.
Kimball Bros. Co., Council Bluffs, Iowa.
Moffatt Mch. Mfg. Co., Charlotte, N. C.
Otis Elevator Co., New York, N. Y.
Snyder Co., Owen, T., Columbus, Ohio.
Spindel, J. G., Reading, Pa.
Warsaw Elevator Co., Baltimore, Md.

HAND AND BELT POWER.

American Elev. & Mch. Co., Inc., Louisville, Ky.
E. C. Elevator Mfg. Co., Kansas City, Mo.
Kimball Bros. Co., Council Bluffs, Iowa.
Moffatt Mch. Mfg. Co., Charlotte, N. C.
Otis Elevator Co., New York, N. Y.
Snyder Co., Owen, T., Columbus, Ohio.
Spindel, J. G., Reading, Pa.

HYDRAULIC.

American Elev. & Mch. Co., Inc., Louisville, Ky.
E. C. Elevator Mfg. Co., Kansas City, Mo.
Moffatt Mch. Mfg. Co., Charlotte, N. C.
Otis Elevator Co., New York, N. Y.

PORTABLE FOR WAREHOUSES, ETC.

Economy Engineering Co., Chicago, Ill.

STEAM HYDRAULIC.

Otis Elevator Co., New York, N. Y.
Ridgway & Son Co., The, Coatesville, Pa.

ELEVATOR BUCKETS.

Alvey Ferguson Co., Inc., Cincinnati, Ohio.
Caldwell & Son Co., H. W., Chicago, Ill.
Hendrick Mfg. Co., Carbondale, Pa.
Jeffrey Mfg. Co., Columbus, Ohio.
Link-Belt Co., Philadelphia, Pa.

ELEVATOR ENCLOSURES AND CABS.

Bolles Iron & Wire Works, J. E., Detroit, Mich.
Dexter Metal Mfg. Co., Camden, N. J.
Dow Wire & Iron Works, Inc., Louisville, Ky.
Dufur & Co., Baltimore, Md.
Dufur, Eggert & Co., Baltimore, Md.
Meyers Mfg. Co., Fred, J., Hamilton, Ohio.
Otis Elevator Co., New York, N. Y.

EMERY WHEEL STANDS.

Webster & Perks Tool Co., The, Springfield, O.

ENAMELS.

Arco Co., Cleveland, Ohio.

ENGINEERS.

AGRICULTURAL.
Morse, Stanley F., New Orleans, La.

APPRAISAL.

Allison, Walter A., Philadelphia, Pa.
American Appraisal Co., The, Milwaukee, Wis.
Black & Veatch, Kansas City, Mo.
Day & Zimmerman, Inc., Philadelphia, Pa.
Ford, Bacon & Davis, New York, N. Y.
Industrial Engineering Corp., Hazard, Ky.
Kinnear & Co., W. S., New York, N. Y.
Meade & Co., Richard K., Baltimore, Md.
Weller, Francis R., Washington, D. C.

BLAST FURNACES.

Fuller Engineering Co., Allentown, Pa.
Guernsey & Co., John B., Roanoke, Va.
McKee & Co., Arthur G., Cleveland, Ohio.
Snyder Co., The, S. K., Pittsburgh, Pa.

BRIDGE.

Concrete Steel Bridge Co., The, Clarkburg, W. Va.
Concrete Steel Engr. Co., New York, N. Y.
Foundation Co., The, New York, N. Y.
Freeland-Klyce Engr. Co., Nashville, Tenn.
Gardner & Howe, Memphis, Tenn.
Hedrick & Hedrick, Kansas City, Mo.
Kinnear & Co., W. S., New York, N. Y.
Luten, Daniel E., Indianapolis, Ind.

CEMENT MILL.

Fuller Engineering Co., Allentown, Pa.
Meade & Co., Richard K., Baltimore, Md.

CHEMICAL.

Abbott, William G., Jr., Wilton, N. H.
Birmingham Mach. & Fdry. Co., Birmingham, Ala.
Dow & Smith, New York, N. Y.
Foundation Co., The, New York, N. Y.
Gilbert, N. A., Ashland, Ala.
Inst. of Industrial Research, Inc., Wash., D. C.
Little, Inc., Arthur D., Cambridge, Mass.
Meade & Co., Richard K., Baltimore, Md.
Nelson, Jr., Wm. P., New Orleans, La.
Pittsburgh Testing Laboratory, Pittsburgh, Pa.

CIVIL.

Arnold, C., The, Chicago, Ill.
Brackett, F. Ernest, Cumberland, Md.
Clark & Krebs, Charleston, W. Va.
Concrete Steel Engr. Co., New York, N. Y.
Foundation Co., The, New York, N. Y.
Gardner & Howe, Memphis, Tenn.
Hall & Sons, B. M., Atlanta, Ga.
Kinnear & Co., W. S., New York, N. Y.
Knowles, Morris, Pittsburgh, Pa.
Moore & Co., W. E., Pittsburgh, Pa.
White Companies, J. G., New York, N. Y.

DAM.

Byllesby & Co., H. M., Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Foundation Co., The, New York, N. Y.
Gardner & Howe, Memphis, Tenn.
Main, Chas. T., Boston, Mass.
Moore & Co., W. E., Pittsburgh, Pa.
Weller, Francis R., Washington, D. C.
White Companies, J. G., New York, N. Y.

DRAINAGE AND IRRIGATION.

Brett Eng. & Contracting Co., Norfolk, Va.
Ford, Bacon & Davis, New York, N. Y.
Knowles, Morris, Pittsburgh, Pa.
Spray Engr. Co., Boston, Mass.

EFFICIENCY.

Abbott, Wm. G., Jr., Wilton, N. H.
Inst. of Industrial Research, Inc., Wash., D. C.
Little, Inc., Arthur D., Cambridge, Mass.
Moore & Co., W. E., Pittsburgh, Pa.
Nelson, Jr., Wm. P., New Orleans, La.

RAILROAD.

Brackett, F. Ernest, Cumberland, Md.
Clark & Krebs, Charleston, W. Va.
Hunt & Co., Robert W., Chicago, Ill.
Kinnear & Co., W. S., New York, N. Y.
Wortham, Edwin, Richmond, Va.

ELECTRICAL.

Abbott, William G., Jr., Wilton, N. H.
Arnold, C., The, Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Friend & Webb, New Orleans, La.
Industrial Engineering Corp., Hazard, Ky.
Lide, Martin J., Birmingham, Ala.
Moore & Co., W. E., Pittsburgh, Pa.
Stone & Webster, Boston, Mass.
Stuart, James & Cooke, New York, N. Y.
Tucker & Laxton, Charlotte, N. C.
Westhouse, Church, Kerr & Co., New York, N. Y.
White, Gilbert C., Charlotte, N. C.
Wiley & Wilson, Lynchburg, Va.

ELECTRIC LIGHT AND POWER PLANTS.

Black & Veatch, Kansas City, Mo.
Byllesby & Co., H. M., Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Foundation Co., The, New York, N. Y.
Graves Engr. Co., Inc., New York, N. Y.
Moore & Co., W. E., Pittsburgh, Pa.
Schofield Engr. Co., Philadelphia, Pa.
Stone & Webster, Boston, Mass.
Weller, Francis R., Washington, D. C.
Westhouse, Church, Kerr & Co., New York, N. Y.
White Companies, J. G., New York, N. Y.
White, Gilbert C., Charlotte, N. C.
Wiley & Wilson, Lynchburg, Va.

GAS.

Allison, Walter A., Philadelphia, Pa.
Byllesby & Co., H. M., Chicago, Ill.
Ford, Bacon & Davis, New York, N. Y.

GEOLOGICAL.

Clark & Krebs, Charleston, W. Va.
Davis, Geo. C., Philadelphia, Pa.
Froehling & Robertson, Richmond, Va.
Institute of Indust. Resch., Inc., Wash., D. C.
Mines Efficiency Co., Duluth, Minn.

HYDRO-ELECTRIC.

Byllesby & Co., H. M., Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Foundation Co., The, New York, N. Y.
Kinnear & Co., W. S., New York, N. Y.
Knowles, Morris, Pittsburgh, Pa.
Main, Chas. T., Boston, Mass.
Moore & Co., W. E., Pittsburgh, Pa.
Schofield Engineering Co., Philadelphia, Pa.
Sirrine, J. E., Greenville, S. C.
Tucker & Laxton, Charlotte, N. C.
Weller, Francis R., Washington, D. C.
White Companies, J. G., New York, N. Y.
Wiley & Wilson, Lynchburg, Va.

INDUSTRIAL PLANT.

Abbott, Wm. G., Jr., Wilton, N. H.
Austin Co., The, Cleveland, Ohio.
Brackett, F. Ernest, Cumberland, Md.
Brooks Engr. Co., C. L., Moultrie, Ga.
Concrete Steel Bridge Co., The, Clarkburg, W. Va.
Day & Zimmerman, Inc., Philadelphia, Pa.
Dixie Engineering & Insulating Co., Atlanta, Ga.
Foundation Co., The, New York, N. Y.
Friend & Webb, New Orleans, La.
Fuller Engineering Co., Allentown, Pa.
Gardner & Howe, Memphis, Tenn.
Institute of Indust. Resch., Inc., Wash., D. C.
International Conveyor Co., The, Wash., D. C.
Kinnear & Co., W. S., New York, N. Y.
Little, Inc., Arthur D., Cambridge, Mass.
McKee & Co., Arthur G., Cleveland, Ohio.
Main, Chas. T., Boston, Mass.
Meade & Co., Richard K., Baltimore, Md.
Moore & Co., W. E., Pittsburgh, Pa.
Nelson, Jr., Wm. P., New Orleans, La.
O'Brien, W. C., Memphis, Tenn.
Scott Engineering Co., The, Pittsburgh, Pa.
Schofield Engineering Co., Philadelphia, Pa.
Shaver, C. E., Memphis, Tenn.
Stone & Webster, Boston, Mass.
Westhouse, Church, Kerr & Co., New York, N. Y.
White Companies, J. G., New York, N. Y.
Wiley & Wilson, Lynchburg, Va.
Wortham, Edwin, Richmond, Va.

INSPECTIONS AND TESTS.

Dow & Smith, New York, N. Y.
Fort Worth Laboratories, Fort Worth, Texas.
Froehling & Robertson, Richmond, Va.
Hunt & Co., Robert W., Chicago, Ill.
Institute of Indust. Resch., Inc., Wash., D. C.
Meade & Co., Richard K., Baltimore, Md.
Moore & Co., W. E., Pittsburgh, Pa.
Pittsburgh Testing Laboratory, Pittsburgh, Pa.

LANDSCAPE.

Burnard, Geo., Washington, D. C.
Hoffman, Leon, Atlanta, Ga.

LEAVES.

Brett Eng. & Contracting Co., Norfolk, Va.
Byllesby & Co., H. M., Chicago, Ill.
Ford, Bacon & Davis, New York, N. Y.
McCrary & Co., J. B., Atlanta, Ga.
Moore & Co., W. E., Pittsburgh, Pa.
Wiley & Wilson, Lynchburg, Va.

MECHANICAL.

Abbott, William G., Jr., Wilton, N. H.
Arnold, C., The, Chicago, Ill.
Dixie Engineering & Insulating Co., Atlanta, Ga.
Friend & Webb, New Orleans, La.
Fuller Engineering Co., Allentown, Pa.
Industrial Engineering Corp., Hazard, Ky.
Lide, Martin J., Birmingham, Ala.
Meade & Co., Richard K., Baltimore, Md.
Moore & Co., W. E., Pittsburgh, Pa.
Tucker & Laxton, Charlotte, N. C.
Wiley & Wilson, Lynchburg, Va.

METALLURGICAL.

Guernsey & Co., John B., Roanoke, Va.
Mines Efficiency Co., Duluth, Minn.

MINE.

Brackett, F. Ernest, Cumberland, Md.
Clark & Krebs, Charleston, W. Va.
Guernsey & Co., John B., Roanoke, Va.
Hall & Sons, B. M., Atlanta, Ga.
International Conveyor Corp., The, Wash., D. C.
Johnston, Jr., A., Langstaff, Richmond, Va.
Mines Efficiency Co., Duluth, Minn.

MUNICIPAL.

Clark & Krebs, Charleston, W. Va.
Dow & Smith, New York, N. Y.
Jennings-Lawrence Co., The, Columbus, O.
Knowles, Morris, Pittsburgh, Pa.
McCrary & Co., J. B., Atlanta, Ga.
Moore & Co., W. E., Pittsburgh, Pa.
White, Gilbert C., Durham, N. C.

PACKING-HOUSE.

Brooks Engineering Co., C. L., Moultrie, Ga.
Dixie Engineering & Insulating Co., Atlanta, Ga.

PAVING AND ROADS.

Brett Eng. & Contracting Co., Norfolk, Va.
Dow & Smith, New York, N. Y.
Freeland-Klyce Engr. Co., Nashville, Tenn.
Institute of Indust. Resch., Inc., Wash., D. C.
Jennings-Lawrence Co., The, Columbus, O.
White, Gilbert C., Durham, N. C.

PUBLIC SERVICE PROPERTIES.

Byllesby & Co., H. M., Chicago, Ill.
Cooper & Co., Hugh L., New York, N. Y.
Day & Zimmerman, Inc., Philadelphia, Pa.
Ford, Bacon & Davis, New York, N. Y.
Kinnear & Co., W. S., New York, N. Y.
Moore & Co., W. E., Pittsburgh, Pa.
Stone & Webster, Boston, Mass.
Weller, Francis R., Washington, D. C.
White Companies, J. G., New York, N. Y.
Wortham, Edwin, Richmond, Va.

RAILROAD.

Brackett, F. Ernest, Cumberland, Md.
Clark & Krebs, Charleston, W. Va.
Hunt & Co., Robert W., Chicago, Ill.
Kinnear & Co., W. S., New York, N. Y.
Wortham, Edwin, Richmond, Va.

REFRIGERATING.

Brooks Engineering Co., C. L., Moultrie, Ga.
Dixie Engineering & Insulating Co., Atlanta, Ga.
Reinforced Concrete.
(Bridges, Buildings, etc.)

Concrete-Steel Engr. Co., New York, N. Y.
Concrete Steel Bridge Co., The, Clarkburg, W. Va.
Foundation Co., The, New York, N. Y.
Freeland-Klyce Engr. Co., Nashville, Tenn.
Gardner & Howe, Memphis, Tenn.
Kinnear & Co., W. S., New York, N. Y.
Luten, Daniel E., Indianapolis, Ind.
Rust Engineering Co., The, Pittsburgh, Pa.
Savannah Eng. & Const. Co., Savannah, Ga.
Tucker & Laxton, Charlotte, N. C.
White Companies, J. G., New York, N. Y.

SEWERAGE AND WATERWORKS.

Black & Veatch, Kansas City, Mo.
Brackett, F. Ernest, Cumberland, Md.
Ford, Bacon & Davis, New York, N. Y.
Jennings-Lawrence Co., The, Columbus, O.
Knowles, Morris, Pittsburgh, Pa.
Moore & Co., W. E., Pittsburgh, Pa.
White Companies, J. G., New York, N. Y.
White, Gilbert C., Durham, N. C.
Wiley & Wilson, Lynchburg, Va.

STEEL WORK AND ROLLING MILLS.

Smythe Co., The, S. R., Pittsburgh, Pa.

STRUCTURAL STEEL.

Freeland-Klyce Engr. Co., Nashville, Tenn.
Hedrick & Hedrick, Kansas City, Mo.
Shaver, C. E., Memphis, Tenn.

ENGINES. (Compressed Air.)

Dake Engine Co., Grand Haven, Mich.

GAS AND GASOLINE.

American-Blakeslee Mfg. Co., Birmingham, Ala.
Cooper Co., C. & G. M., Vernon, Ohio.
De La Vergne Machine Co., New York, N. Y.
Foss Gas Engine Co., Springfield, Ohio.
Machinery Utilities Co., New York, N. Y.
Mietz Corp., August, New York, N. Y.
National Transit Pump & Mch. Co., Oil City, Pa.
Novo Engine Co., Lansing, Mich.
United Machine Works, New York, N. Y.
White Engine Works, Kansas City, Mo.

KEROSENE.

American-Blakeslee Mfg. Co., Birmingham, Ala.
Novo Engine Co., Lansing, Mich.
United Machine Works, New York, N. Y.
White Engine Works, Kansas City, Mo.

OIL.

Baltimore Oil Engine Co., Baltimore, Md.
Buckeye Machine Co., The, Lima, Ohio.
Chicago Pneumatic Tool Co., Chicago, Ill.
De La Vergne Machine Co., New York, N. Y.
Foss Gas Engine Co., Springfield, Ohio.
Machinery Utilities Co., New York, N. Y.
Mietz Corp., August, New York, N. Y.
Muncie Oil Engine Co., Muncie, Ind.
National Transit Pump & Mch. Co., Oil City, Pa.
Power Mfg. Co., The, Marion, Ohio.
United Machine Works, New York, N. Y.
Worthington Pump & Mch. Corp., New York, N. Y.

STEAM.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Ames Iron Works, Oswego, N. Y.
Ball Engine Co., Erie, Pa.
Buffalo Forge Co., Buffalo, N. Y.
Clark Bros. Co., Olean, N. Y.
Cooper Co., C. & G. M., Vernon, Ohio.
Erie Pump & Engine Co., Medina, N. Y.
Harris Bros. Co., Chicago, Ill.
Hardie-Tyres Mfg. Co., Birmingham, Ala.
Houston, Stanwood & Gamble Co., Cincinnati, O.
Lefel & Co., James, Springfield, Ohio.
Lombard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Charlotte, N. C.
Morris Machine Works, Baltimore, Md.
Murray Iron Works Co., Burlington, Iowa.
Nagle Corliss Engine Works, Erie, Pa.
National Transit Pump & Mch. Co., Oil City, Pa.
Schofield Iron Works, Macon, Ga.
Vilmer Mfg. Co., Milwaukee, Wis.

UNIFLOW.

Ames Iron Works, Oswego, N. Y.

ENVELOPES.

Young & Seiden Co., Baltimore, Md.

EVAPORATORS. (Chemical.)

Birmingham Mch. & Fdry. Co., Birmingham, Ala.

EVAPORATING MACHINERY.

Louisville Drying Mch. Co., Louisville, Ky.

EXCAVATING MACHINERY.

American Clay Mch. Co., The, Bucyrus, Ohio.
Ball Engine Co., (Erie Steam Shovel Co.) Erie, Pa.
Bay City Dredge Works, Bay City, Mich.
Buckeye Traction Ditcher Co., Findlay, Ohio.
Byers Machine Co., The, John F., Ravens, O.
Fairbanks Steam Shovel Co., Marion, Ohio.
Hayward Co., The, New York, N. Y.
Keystone Driller Co., Beaver Falls, Pa.
Lidgerwood Mfg. Co., New York, N. Y.
Monaghan Machine Co., Chicago, Ill.
Morris Machine Works, Baltimore, Md.
Owens Corning Fibre Co., Marion, Ohio.
Owen Bucket Co., The, Cleveland, Ohio.
Sauerman Bros., Chicago, Ill.

EXCAVATORS.

CARLEWAY DRAGLINES.
Ball Engine Co., (Erie Steam Shovel Co.) Erie, Pa.
Sauerman Bros., Chicago, Ill.

TRENCH.

Ball Engine Co., (Erie Steam Shovel Co.) Erie, Pa.
Bay City Dredge Works, Bay City, Mich.
Buckeye Traction Ditcher Co., Findlay, Ohio.
Fairbanks Steam Shovel Co., Marion, Ohio.
Hayward Co., The, New York, N. Y.
Keystone Driller Co., Beaver Falls, Pa.
Monaghan Machine Co., Chicago, Ill.

EXCELSIOR MACHINERY.

Kline, Lewis T., Alpena, Mich.
Durion Casting Co., Dayton, Ohio.

EXHAUST FANS. (Acid Proof.)

Abendroth & Root Mfg. Co., Newburgh, N. Y.
American Spiral Pipe Co., Chicago, Ill.
De Pont de

125

IRON FENCING.
Hewart Iron Works Co., Cincinnati, Ohio.

IRON ORES.
Southern Minerals Corp., Boston, Mass.

IRRIGATING MACHINERY.
Ameron St. Pump Wks., A. S., New York, N. Y.

JETTY STONE.
Small Quarries Co., A. T., Macon, Ga.

JOIST HANGERS.
An Dorn Iron Works Co., The, Cleveland, Ohio.

KETTLES, JACKETED & PLAIN. (Acid Proof.)
Duriron Castings Co., Dayton, Ohio.
Valley Iron Works, Williamsport, Pa.

KILNS.
Machinery Utilities Co., New York, N. Y.

KNITTING MACHINERY.
Scott & Williams, New York, N. Y.

LACE LEATHER.
Graton & Knight Mfg. Co., Worcester, Mass.
Schieren Co., Chas. A., New York, N. Y.

LADDERS. (Rolling.)
Myers & Bros., F. E., Ashland, Ohio.

LAMPS. (Arc and Incandescent.)
General Electric Co., Schenectady, N. Y.
Piedmont Electric Co., Asheville, N. C.
Westinghouse Elect. & Mfg. Co., E. Pittsburgh, Pa.
Westinghouse Lamp Co., New York, N. Y.

LAMPS. (Carbon and Tungsten.)
Newman Electric Lamp Co., Cincinnati, Ohio.

LATH. (Metal.)
Berger Mfg. Co., Canton, Ohio.
Consolidated Expanded Metal Co.'s, Braddock, Pa.
Edwards Mfg. Co., Cincinnati, Ohio.
General Fireproofing Co., Youngstown, Ohio.
Milwaukee Corrugating Co., Milwaukee, Wis.
Northwestern Expanded Metal Co., Chicago, Ill.
Penn Metal Co., New York, N. Y.

LAWN FURNITURE. (Wire.)
Boiles Iron & Wire Works, J. B., Detroit, Mich.
Boyle & Co., Baltimore, Md.
Dufur, Baggot & Co., Baltimore, Md.

LIGHTING FIXTURES.
Mitchell, Vance Co., Inc., New York, N. Y.

LIMESTONE. (Building.)
Ind. Limestone Quarries' Assn., Bedford, Ind.

LINE SHAFT BEARINGS AND HANGERS.
Hynat Roller Bearing Co., New York, N. Y.

LIQUOR FILTERS.
International Filter Co., Chicago, Ill.

LITHOGRAPHERS, ENGRAVERS.
Roberts & Sons, Birmingham, Ala.
Young & Seiden Co., Baltimore, Md.

LOADING AND UNLOADING MCHY. (Portable.)
Portable Machinery Co., Inc., Passaic, N. J.

LOCKERS.
STEEL.
Berger Mfg. Co., Canton, Ohio.
Dexter Metal Mfg. Co., Camden, N. J.
Edwards Mfg. Co., Cincinnati, Ohio.

LOCOMOTIVES.
INDUSTRIAL.
Baldwin Locomotive Wks., The, Philadelphia, Pa.
Climax Mfg. Co., Corry, Pa.
Jeffrey Mfg. Co., Baltimore, Ohio.
Porter Co., H. K., Pittsburgh, Pa.

RAILWAY.
Baldwin Locomotive Wks., The, Philadelphia, Pa.
Porter Co., H. K., Pittsburgh, Pa.

LOOMS AND WEAVING MACHINERY.
Crompton & Knowles Loom Wks., Worcester, Mass.
Draper Corporation, Hopedale, Mass.
Saco-Lowell Shops, Boston, Mass.

LUBRICANTS.
Albany Lubricating Co., New York, N. Y.
Borne, Crummett Co., New York, N. Y.
Oils Electric Co., New York, N. Y.
Standard Oil Co. of Louisiana, Baton Rouge, La.
Swan & Finch Co., New York, N. Y.
Texas Co., The, New York, N. Y.

LUBRICANTS. (Graphite.)
Dixon Crucible Co., Joseph, Jersey City, N. J.

LUBRICATORS.
Edna Brass Mfg. Co., Cincinnati, Ohio.

LUMBER.
CEILING, FLOORING, SIDINGS.
Bacon & Sons, A. S., Savannah, Ga.
CRESOTED.
American Cresote Works, New Orleans, La.
Cresotated Materials Co., Inc., New Orleans, La.

HEAVY CONSTRUCTION, PITCH PINE, ETC.
Bacon & Sons, A. S., Savannah, Ga.
Great Southern Lumber Co., Bogalusa, La.
Industrial Lumber Co., Elisabeth, La.
Mathews Lumber Co., Macon, Ga.

YELLOW PINE.
Bacon & Sons, A. S., Savannah, Ga.
Great Southern Lumber Co., Bogalusa, La.
Industrial Lumber Co., Elisabeth, La.
Mathews Lumber Co., Macon, Ga.

LUMBER BUGGIES.
Soule Steam Feed Works, Meridian, Miss.

LUMBER STACKERS.
Soule Steam Feed Works, Meridian, Miss.

MACHINERY. (Special.)
American-Bakelite Mfg. Co., Birmingham, Ala.
Bliss Co., E. W., Brooklyn, N. Y.
Clark Bros. Co., Olean, N. Y.
Folts Mfg. & Supply Co., Hagerstown, Md.
Kentucky Electrical Co., Owensboro, Ky.
Kline, Louis E., New York, Mich.
Lockett & Co., Ltd., A. M., New Orleans, La.
Stratton & Bragg Co., Petersburg, Va.
United Machine Works, New York, N. Y.

MACHINERY AND SUPPLIES. (New and Second-hand.)
American Metallic Packing Co., Lexington, Ky.
Ascension Bed Cypress Co., New Orleans, La.
Beckwith Machinery Co., The, Pittsburgh, Pa.
Bender Iron & Supply Co., Birmingham, La.
Bunker Co., Birmingham, Ala.
Boston Iron & Metal Co., Inc., Baltimore, Md.
Bruch, H. M., Syracuse, N. Y.
Carey Co., Thos. F., New York, N. Y.
Cleveland Belling & Mch. Co., The, Cleveland, O.
Clifton Co., The, Cincinnati, Ohio.
Consolid. Mchry. & Wrecking Co., New York, N. Y.
Contractors' Mchry. & Supply Co., Pittsburgh, Pa.
Con. Mchry. & Wreck. Co., Inc., New York, N. Y.
Co-Operative Eng. Co., Inc., New York City.
Crawford Mill Supply Co., Winstons-Salem, N. C.
Davis, J. F., Chicago, Ill.
Deane Electric Co., Pittsburgh, Pa.
Easton Machinery Co., Easton, Pa.
Elliott Electric Co., Cleveland, Ohio.
Empire Mchry. & Supply Corp., Norfolk, Va.
Empire Engineering Co., N. Y., New York, N. Y.
Fuerst & Co., The, Cleveland, Ohio.
General Equipment Co., New York, N. Y.
Givins Co., Herbert, New York, N. Y.
Greory Electric Co., Chicago, Ill.
Greensboro Supply Co., Greensboro, N. C.
Harris Bros. Co., Chicago, Ill.
Hawkins-Smith Co., Inc., The, Richmond, Va.
Herfurth Engine Co., Alexandria, Va.
Herman, Albert, Jersey City, N. J.
Hitner's Sons Co., Henry A., Philadelphia, Pa.
Hodgson Machinery Co., Knoxville, Tenn.
Holloway Engine Sales Co., New York, N. Y.
Holling Machinery Co., New York, N. Y.
Howland, F. L., New York, N. Y.
Johnston Co., Inc., W. T., Cincinnati, Ohio.
Jones Machinery Co., K. L., Atlanta, Ga.

SPRINGFIELD

Spencer Iron Co., Isaac, Cincinnati, Ohio.
Baton Pipe & Supply Co., Butler, Pa.
Lein & Co., Nathan, New York, N. Y.
Aue Equipment Co., J., Springfield, Ohio.
Schuman, T. H., Chicago, Ill.
Lodge & Shipley Machine Tool Co., Cincinnati, O.
Oner Co., W. B., Chicago, Ill.
McLaughlin & Co., A. A., Cincinnati, Ohio.
Hatchery Exchange Co., New Orleans, La.
Machinery & Supply Co., Greensboro, N. C.
Chicago Waterworks & Sales Co., Chicago, Ill.
Sales Co., The, New York, N. Y.
Railory Machinery Corp., Baltimore, Md.
Jalsby Machinery Co., Jacksonville, Fla.
Marine Metal & Supply Co., New York, N. Y.
Laird-Bell-McNary Co., Chicago, Ill.
Tayer, F., Chicago, Ill.
Hartfield-Garbutt Machinery Co., Savannah, Ga.
Miller-Crippen Equipment Co., Syracuse, N. Y.
Holler-Owen Electric Co., Inc., Pittsburgh, Pa.
Fielder-Mechy, Exchange, New York, N. Y.
Hoober Bros., Chicago, Ill.
Totter's Sons, Geo. F., York, Pa.
New York Machinery Exchange, New York, N. Y.
Kusbaum & Co., V. M., Ft. Wayne, Ind.
E'Brien Machinery Co., Philadelphia, Pa.
Fryer, Howard B., Pittsburgh, Pa.
Rayne, E. R., Chicago, Ill.
Peerless Iron Pipe Exc., Inc., New York, N. Y.
Penn Supply & Equipment Co., Philadelphia, Pa.
Annuaire Engineering Co., Chicago, Ill.
Phoenix Construction Co., New York, N. Y.
Singer & Contractors Supply Co., New York, N. Y.
Pittsburgh Machinery & Supply Co., Pittsburgh, Pa.
Potts & Co., Henry, Philadelphia, Pa.
Power Equipment Co., Philadelphia, Pa.
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Cannell Sewer Pipe Co., Cannell, Ind.
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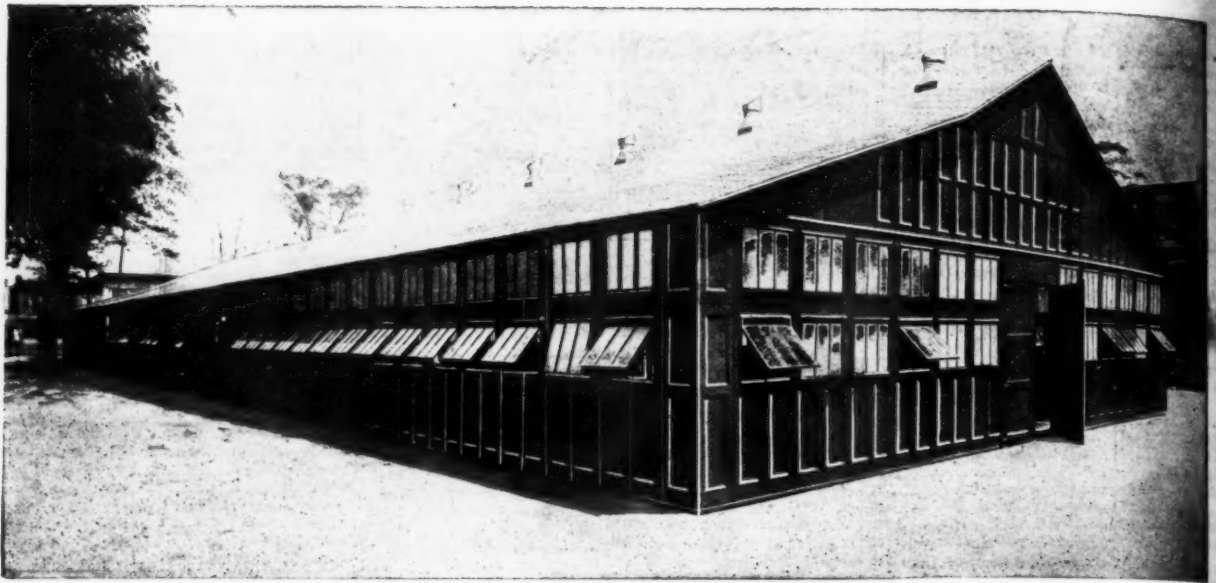
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Pittsburgh Filter Mfg. Co., Pittsburgh, Pa.
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Tucker & Laxton, Charlotte, N. C.
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Electric Ozone Sterilizer Co., Chicago, Ill.
- WATERWORKS, SUPPLIES, APPLIANCES**
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Bourbon Copper & Brass Wks. Co., Cincinnati, O.
Cast Iron Pipe Publicity Bureau, New York, N. Y.
Coldwell-Wilcox Co., Newburgh, N. Y.
Columbian Iron Works, Chattanooga, Tenn.
Glagorgan Pipe & Fdry. Co., Lynchburg, Va.
Layne & Bowler Co., Memphis, Tenn.
Michigan Pipe Co., Bay City, Mich.
Standard Spiral Pipe Works, Chicago, Ill.
U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.
Wood & Co., R. D., Philadelphia, Pa.
- WATCHMAN'S PORTABLE CLOCKS**
Eco Clock Co., Boston, Mass.
Hardinge Bros., Inc., Chicago, Ill.
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Williams Bros., Ithaca, N. Y.
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Truscon Steel Co., Youngstown, Ohio.
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- WINDOW SASH (Steel.)**
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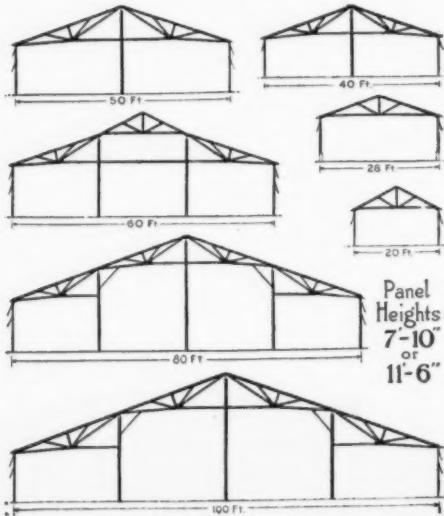
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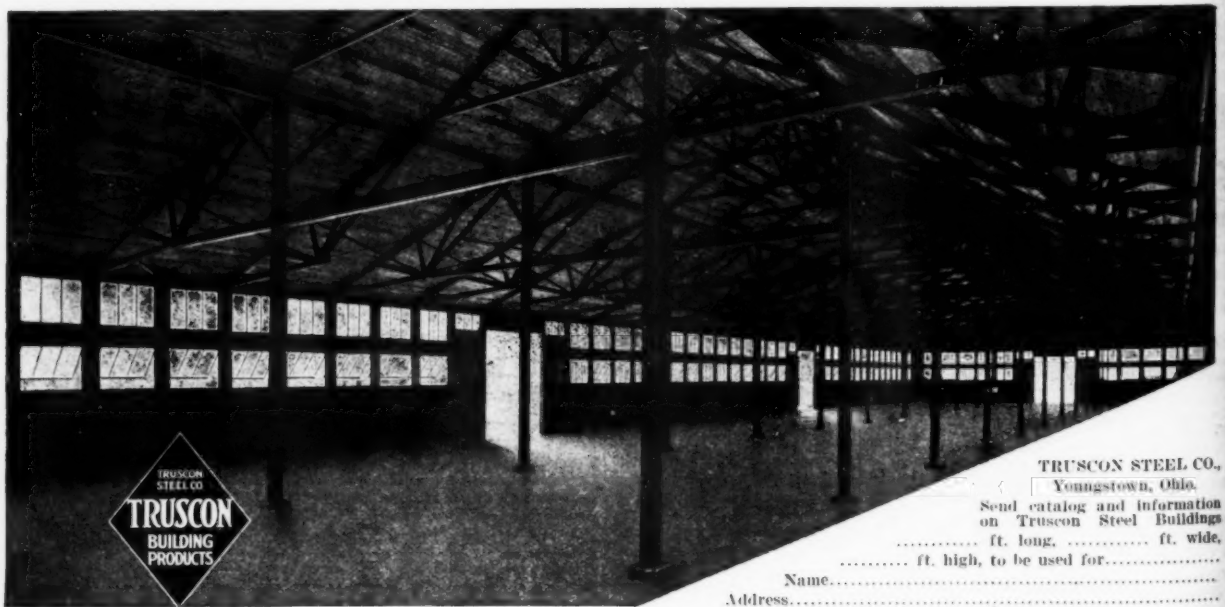
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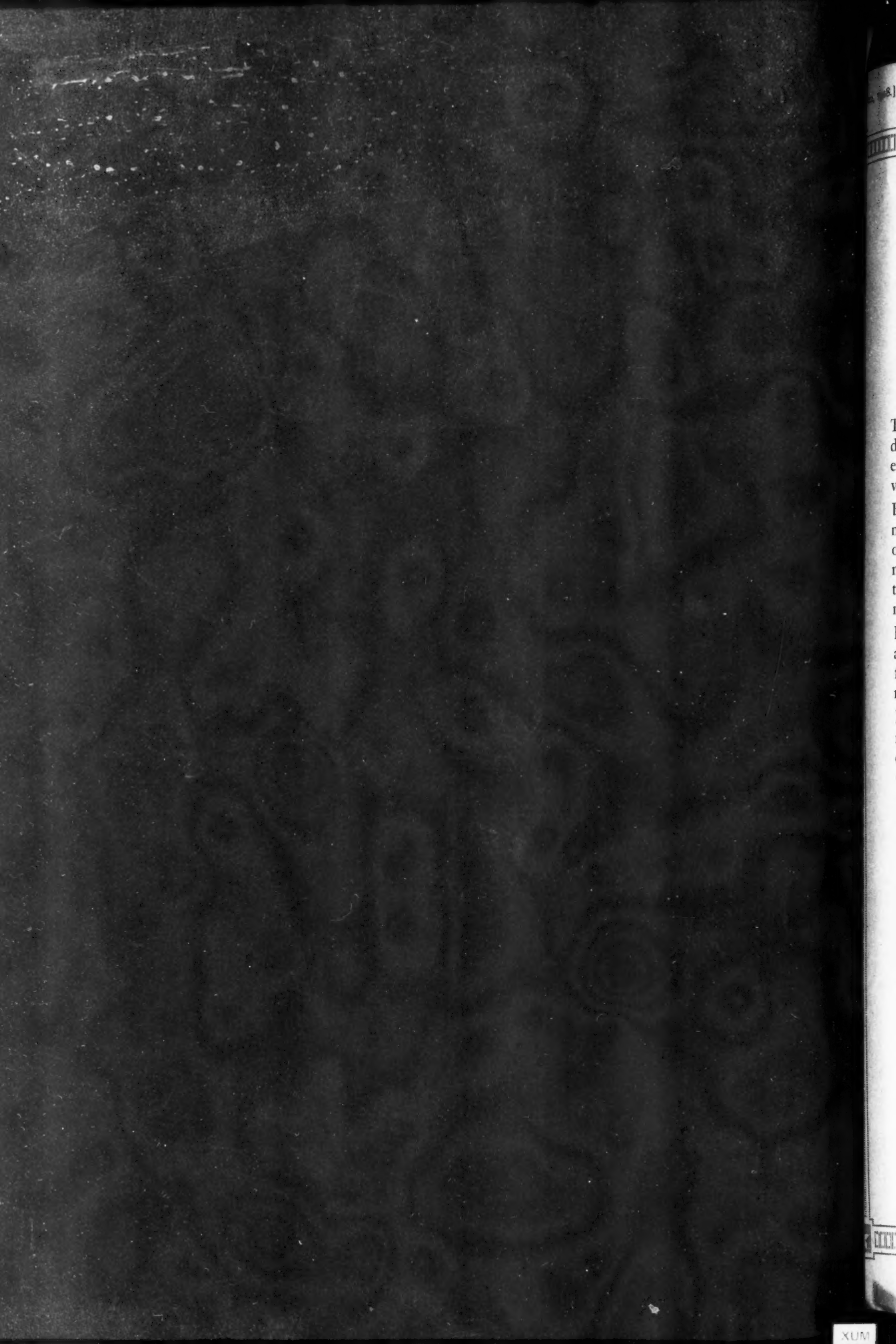
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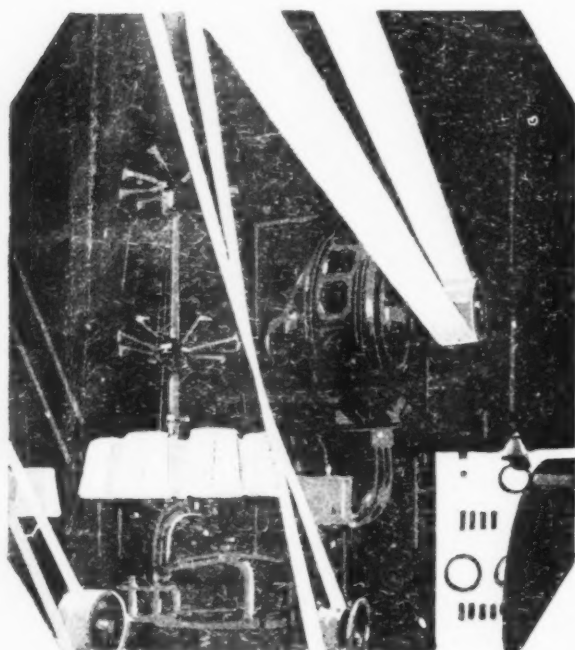
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